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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND ACADEMIC DEPARTMENTS

VOL. VI FEBRUARY 1891 NO. 1

*THE EDUCATIONAL SYSTEM IN PUBLIC SCHOOLS.**

REV. J. E. C. WELLDON, HEADMASTER OF HARROW SCHOOL.

I.

The educational problem is perpetual; it has not been, nor perhaps can it ever be, solved. For it is the adjustment of moral and intellectual discipline to the characteristic conditions of the time, and those conditions are necessarily variable. The preparatory part of human life is a constant quantity; so too, I am afraid, is the receptive capacity of average minds; but the number of subjects making up the sum of knowledge is always, and has of late been rapidly, increasing. It follows then that, except in so far as an improved distribution of school-hours enables the same people to do more work in the same time, whatever amount of mental energy is spent upon one subject is at once so much taken from the rest. It is not enough, therefore, to show that a subject is worth learning; we must show that it is better worth learning than such other subjects as are or may be displaced by it. Thus, to take the case of Latin versification, it is an art which may be elegant and elevating and may lend a new pleasure to life; but, if it takes up so much time as to prevent the acquisition of indispensable knowledge, it stands condemned, for the large majority of boys, not indeed absolutely, but in relation to the proper ends of educational science. Hence it is the first duty of the educator at the present day to consider the relative value of subjects in education.

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* The term "public school" has in England, as most of our readers know, a meaning entirely different from that of the same expression in the United States. Mr. Welldon, however, has treated his subject with such insight into underlying principles, and with so broad a grasp of universal truths in education, that to the thoughtful teacher here the paper will have the same value which it has to its English readers. To our request for permission to put it before the secondary teachers of the United States, Mr. Welldon promptly gave a cordial assent, and it is with no small pleasure that we give our readers the benefit of his kindness. We have ventured to omit two or three paragraphs which deal with conditions not existing in this country. The second part of the article will appear in The Academy for March.

It is not always seen how serious is the difficulty which the multiplicity of subjects places in the way of an educational system. Fifty years ago the education in public schools, if it was narrow, was at least precise and definite. The good old formula "a scholar and a gentleman" (though perhaps the scholarship was sometimes sacrificed to the gentility) sufficiently expressed the ideal of parents and schoolmasters. It is not unfair to say that the curriculum of the great public schools at the beginning of this century was practically the same as it had been three centuries earlier. The reign of Queen Elizabeth was one period of educational progress, and the reign of Queen Victoria has been another; but all that lies between them may be called the Middle Ages of scholastic history. Dr. Malim could have walked through the playing fields at Eton in amicable conversation with Dr. Hawtrey; but it is sad to reflect what would be his feelings if he should listen to the views of Dr. Warre. One significant fact, taken by itself, is a witness to the necessity of educational reform. The late Dean Stanley, in his biography of Dr. Arnold, claims that he was the first English headmaster who made an attempt to incorporate such subjects as modern history, modern languages, and mathematics in the regular work of his school. He adds that, though Dr. Arnold found no great difficulty in introducing modern history at Rugby, it was made impossible for him, by the obstacles put in his way, to introduce the other subjects except tentatively, by slow degrees, and under strict limitations. The study of mathematics, as may be expected, was the first to intrude into the preserve of the old classical languages. Yet mathematics dates at Harrow from the year 1826, at

Eton from the year 1836. When Mr. Stephen Hawtrey, *quem honoris ac pietatis causa nomino*, went to Eton hardly more than fifty years ago, he was not allowed to teach mathematics except as an extra subject, nor to teach it to any boys except to such as were in the headmaster's division, and to them only if their parents wished them to learn it. Yet mathematics was a thriving subject at Eton and elsewhere before the birth of natural science in public schools.

Fifty years ago not only was there little demand for an education extending beyond Latin and Greek, but had the demand existed it could not well have been met. It would have been difficult to provide such books and appliances as are necessary for teaching modern languages or natural science. It would have been still more difficult to find the teachers. Few Englishmen of academical position had thought it worth while to enlarge their own education by going to live for a time in some foreign country or by entering upon a course of study in a laboratory. There was a sort of tacit agreement among schoolmasters that the mental discipline of their own generation had been the best possible, and, if a critic pointed out some defects occurring in the educational system, it was easy to reply that the critic had himself been educated under the system which he condemned.

It is a different case with education today. For if it was once hard to find the means of extending the educational system in public schools, it is equally hard now to find the means of confining it. The modern schoolmaster is called upon to teach new subjects without surrendering or impairing the old. It is taken for granted that if a boy leaves his public school, after spending three or four years under instruction there, without having gained any knowledge of English subjects, such as history and geography, without having read any book in French or German, and without having learnt the elements of natural science, he is an educational failure, whatever may be his skill in athletic games or his knowledge of the world. One party of educational reformers insists upon the value of natural science, another upon the value of English literature, a third upon the value of modern languages, and, indeed, of modern languages taught colloquially. Meanwhile, mathematical subjects have risen in importance, besides becoming wider in range. And classical learning, in its recent developments of philology and archæology, which enter partially, if not fully, into the intellectual life of schools, tends to demand a greater interest and attention.

It may perhaps be doubted if modern schoolmasters have appreciated this novel aspect of the educational problem. It has been a temptation to introduce subjects into the curriculum as "happy thoughts" without a sense of proportion. An examination of studies in the old public schools (such as I was led to make some time ago) suggests the thought that their educational system is still essentially the classical system, only modified by the accretion of new subjects. It is, if I may use a figure, more like an old coat let out here and there to suit a growing child than like a new coat properly made to fit his body. Perhaps the subject which has fared the worst in schools (probably because headmasters knew the least about it) is natural science. There has been a prevailing idea that natural science should be taught. But whether it should hold a primary or a subordinate place in education, whether it should be taught to all boys during their whole school-life or to all boys during a part of it, or to some boys during the whole or to some during a part; and again, as natural science is a comprehensive term, whether all the subjects which fall under it are of equal purpose and value as educational instruments, and, if not all, which should be preferred in particular circumstances, and within what limits or under what conditions a liberty of choice among these subjects should be given to individuals — these are questions upon which it has hardly as yet been possible to arrive, or even to aim, at an agreement.

The present paper is an attempt at suggesting some considerations which may pave the way for a reform in education. For it is the time-table which is the test of the modern schoolmaster; it is there that he may win his main success. But to construct a satisfactory time-table, to take the five hundred boys or more who make up a school, varying, as they do, in age, intelligence, and curiosity, to pay regard to their needs collectively and individually, to put each one of them in the way of learning what is good for him, and of learning neither more nor less than this, to provide that their education shall be wide without being vague, and that, while it is suitable to the mass of boys who must be ordinary, it shall not forbid the special culture of the select or gifted few — this is a task of severe and serious difficulty. Yet it is only he who has been called to essay it that knows where the difficulty lies, and how great it is.

* * * * * * * *

Educational reform may proceed upon two lines. It may aim at preserving all such rigidity, in the principles of a public school, as is not inconsistent with the satisfaction of inevitable modern demands. Or it may aim at allowing the utmost elasticity which is not inconsistent with a definite school system. In other words, it will either restrain specialization except in so far as it is necessitated by external circumstances, or it will encourage specialization except in so far as it imperils the common corporate life of the school. There are numerous considerations which seem to show that the second of these views is the truer. It is justified by the increasing number of educational subjects, by the variety of the examinations in which boys take part and of the callings in life for which they are prepared, by the study of individual needs and capacities, and by the natural desire of giving every boy the best chance of doing himself justice in the world. Accordingly, it will be the educator's object to ascertain at the earliest time the study or studies in which a boy is capable of excellence. He will start with the assumption that every boy possesses some faculty and that he must discover it. Nor will he count himself successful unless in his school the largest number of boys are enabled and encouraged to pursue their appropriate studies.

Still, no sooner is this principle stated than it is felt to require some limitation. It is evident that an absolute freedom in educational subjects is chimerical. Tastes and talents do not reveal themselves at an early age; it is often more difficult to discover what a boy can learn well than to afford him the opportunity of learning it. Again, nobody has yet succeeded in showing how a school can be organized and administered without some sacrifice of individuality among its members. The association of boys in forms, classes, pupil-rooms, or houses implies a subordination of personal character to the good of the whole. But the determining fact, which is apt to be forgotten when specialization is advocated as a panacea for the intellectual failings of the young, is that education (as opposed to mere instruction) loses a large part of its value if it be not to some extent the common property of all educated persons. Let it be granted, for argument's sake, that an education in mathematics or in natural science is as good a mental discipline as an education of a linguistic and literary kind; yet for the purposes of life two people educated (let me suppose), one in mathematics or science alone, the other in the classical languages, if they come into contact, are less efficient than they would be if the mathematician or man of science were not in ignorance of Latin and Greek or the literary man of mathematics and natural science. It is not, I think, sufficiently realized how much of human happiness and culture depends upon a community of intellectual interests. The knowledge which is common to all cultivated persons is a sort of *lingua franca*, and nothing can make amends for the loss of it. A premature and exclusive specialization is not only prejudicial to the mind; still more is it prejudicial to the conduct of life. For if it is true, as experience shows, that the student of one subject, whether language, or mathematics, or science, imperceptibly acquires a certain mental temper, which it is not the less easy to understand because it is difficult to define, then education, taken in a large sense, ought to aim at correcting this one-sidedness, at restoring the intellectual balance, and at qualifying the student for meeting all such duties and difficulties as may come in his way.

If these considerations are admitted to be just, it seems to follow that educational subjects are divisible into two classes. There are such subjects as form the common stock of educated people; they should be taught to all boys, in a greater or less degree, during the whole, or nearly the whole, of their school-life; I call these the fundamental or *primary* subjects. The other subjects, which I call *secondary* or accessory, are of such a nature that boys should not all be made to learn them, nor should any boy be made to learn them throughout his school-life; but boys should have the opportunity of learning them, and should learn as many of them, or some of them, for as long a time as may be suitable to their intellectual needs and capacities; or, if I may put the matter otherwise, it may be said that there will be a common educational basis, and upon this will be raised a superstructure differing in character and extent according to circumstances.

Such a statement of the case clears away some difficulties which have at times been felt by a good many educational reformers. For instance, it has been proposed to organize a school upon the principle of bifurcation or trifurcation, or (as I think) some still more formidable furcation, the idea being that there should be a classical department, a modern department, a science department, and so on, and that the education given in each department should be essentially different from the education given in every other. But such a school is, in fact, several schools in one; it is deficient in cohesion and co-ordination; indeed, it is only an accident (so to say) that its members receive instruction in the same buildings. Nor is there any particular virtue in the comparison of a reformed educational system to a fork:

> "Naturam expellas furca, tamen usque recurret."

Perhaps the truer representative of such a system would be a tree, the trunk remaining always the same, though slowly tapering and sending out its branches on all sides. It seems clear, too, that the gradual widening of educational opportunities in a school will correspond with the process of a boy's life. In his early years, when his position is low in the school, he will learn the same subjects at the same times as all other boys in his form. Little or no privilege of choice will be allowed him; nor is it necessary. But as he grows older and advances in the school, as he becomes conscious, or his master becomes conscious, of whatever powers and faculties belong to him, the opportunity of specialization will present itself. In a word, educational reform will begin with rigidity, it will end with elasticity. It will begin with the subjects which all boys alike are bound to know, and will end with such subjects as each individual boy is capable of learning with most profit. It will begin with an adherence to the primary, it will end with an encouragement of the secondary, subjects. But, as has been already said, it will never, at least in a public school, entirely sacrifice the primary subjects to the secondary, or the primary subjects in general to one such subject.

* * * * * * * *

The subjects of primary importance in education are decided partly by the constitution of the human mind and partly by the practical needs of life. Thus it is essential to excite in the mind the idea of proof, that it may distinguish between what is known and what is not known. To know what knowledge is, is the beginning of knowledge. The habit of exact thought is indispensable to all thought. That the difference between proof and probability is an absolute one, that the mind must not rest satisfied with less than proof whenever it is attainable, and, if it cannot be attained, must understand the nature and cause of the difficulty in attaining it—these are lessons which must be learnt and laid to heart in the earliest days of self-culture. There is no instrument of teaching them like mathematics.

But, as soon as the nature of exact proof is understood, it is necessary to apprehend that such proof is not commonly given in human affairs. If we delay action until we are certain, we shall never act at all. Human life itself is a venture; so are most undertakings and decisions in it. Bishop Butler, in laying down his golden rule that "probability is the very guide of life," denied implicitly to the science of exact thought the first place in an educational system. It is something different from mathematics, something more liberal or more human, that is needed to fit men for the conduct of life. Such a study is pre-eminently the study of language. Language is a human product, and the powers evoked in passing a judgment upon literary or linguistic questions are akin to the powers required by conflicting probabilities in life. But to this point I will presently return.

The necessary education of all men cannot be said to be satisfied by the discipline of exact thought or of practical wisdom. Man is placed in a physical universe; he is surrounded by objects of beauty, awe, and wonder; his curiosity is aroused by experience; his life is subject to the limitations of law. Even if the study of natural science were not, as it is, second only to mathematics in its power of refining the intellectual faculty, and superior to it in its power of stimulating observation, it would possess a unique claim to a place in education, as enabling a man to understand his environment and, in the Baconian phrase, to conquer Nature by obeying her. It is incredible that boys should have been so long left ignorant of the world in which their lives must be spent. It is incredible that their interest in scientific study should still be so indolent and half-hearted. But the fault is not in the subject; it is in the teachers. Considering that the teacher of natural science in various branches is dealing with facts which come home to boys' daily consciousness, that he possesses in experimentation an educational instrument upon which the classic or mathematician looks with envy, and that it is in his power to put young minds in the way of learning new truths for themselves, I am astonished—I cannot help saying so—at the poverty of the results attained in schools by the teaching of science. But it is enough for my present purpose to have shown that natural science claims a large, and will probably claim a still larger, place in a good educational system.

But, as man is a denizen of a physical universe, so is he also a citizen of a particular country and age. His education must take into account his contemporaries and neighbors, the history of his land and its opportunities. Thus the Christian religion, considered not only doctrinally and morally, but historically, is a subject calling for systematic instruction. Thus, too, English literature and English history appeal to Englishmen more directly than the literature and history of other countries. Probably it will some day be thought strange that the youth of England, after spending several years in its public schools, should at any time have been sent into the world without a knowledge of the illustrious men who by their writings or by their deeds have ennobled and exalted the English name. Whatever other reform is made in education, English subjects must no more be ignored by English boys.

It is only going one step further to lay down the principle that in an age of rapid and constant intercommunion between the various states and peoples of Europe, one modern language, and that the language of widest influence and circulation, deserves recognition among the primary educational subjects. It is possible that German is the most useful modern language for purposes of scholarship and science; but if one modern language is to be chosen as a general educational instrument, it must, I think, undoubtedly be French.

It appears, then, that by a natural process of reasoning we have been led to ascertain the primary subjects which will constitute, as it were, the backbone of a reformed or scientific educational system. Divinity, mathematics, language studied for its own sake, French studied as an instrument of utility, some branch or branches of natural science, and the elements, at least, of English literature and history as well as of geography will make up the sum of knowledge without which no person who may claim to be educated will enter upon life.

But it is necessary to define two of these subjects a little more closely. What is the language to be studied scientifically or for its own sake? Shall it be preferentially a living or a dead language? And, if one of the dead languages, which of them? Now, it seems clear that, as an object of scientific study, a dead language possesses some advantages. It does not lend itself to the natural temptation of sacrificing accuracy to utility. A language which is spoken can hardly be treated except as being spoken; it finds its natural use in conversation. A student may acquaint himself, as well as he can, with the grammatical and literary characters of such a language; but he is not satisfied unless he can utilize it when travelling abroad.

It is practically certain that the minute care bestowed for generations upon the forms and idioms of the classical languages would have been regarded as misspent had it been possible to make use of them in practical daily life. It is worth observing, too, that all students stand on an equal footing in respect of the dead languages, while a partial descent from a foreign family, or the teaching of a foreign governess in early years, or the opportunity of residing abroad gives many a student a considerable start in the learning of a modern language. It has been with some surprise that distant observers have seen some great educational institutions awarding prizes for proficiency in foreign languages to boys bearing unmistakably foreign names. But the case for a dead language is strengthened if the study of a modern language, as has been shown, holds a place in the curriculum independently of scientific grounds. It will probably be admitted that the mind is capable of learning in its educational years at least two languages; and if one of these is a living language studied for use, the other may well be a dead language studied scientifically. But the case becomes so strong as to be irresistible if there is a dead language which may be regarded as occupying an imperial position in the world, which is the language of law, of liberty, and of religion, which is the parent of half the languages spoken in Europe, which exhibits a singular strength and precision of grammatical idioms, and which has been so long and closely studied as to be furnished with the necessary means and appliances for teaching. Such a language is Latin; and I cannot help thinking it would be an educational mistake of serious magnitude to lose the universality of the Latin language as an element of the higher education. There is a purpose in my saying so; for it has happened that some schoolmasters, whether acting, as may be the truth, under a servile fear of parents, or, as I prefer to think, losing sight of general principles, are prepared to sacrifice Latin, when they have already sacrificed Greek, to supposed utilitarian demands. It may reasonably be argued that Latin, from its relation to the Romance languages, is a subject of conspicuous utility; but it is not so much upon that ground that I defend it. I defend it as entering, from its nature and its history, into that collection or corporation of subjects which makes up, or ought to make up, the intellectual furniture of every educated man.

It is not unknown to me that some educational theorists, while admitting the claim of a dead language to a constant place in the educational system, hold that that language should be Greek rather than Latin. They urge in support of this opinion, if I understand them, that Greek is the more beautiful language, and that its literature is not only more original and instructive, but is proved by experience to be more interesting to boys. It is possible to admit the contention without admitting the conclusion. The idea of substituting Greek for Latin as a primary educational subject has never appeared to me practical. Whatever may be the comparative merits of the languages and literatures of ancient Greece and Rome (and it is a comparison which need not now be made), Latin stands so much closer to modern life, it is so much more nearly related to the other subjects which constitute, as I have already said, the sum of education, that it possesses an inevitable superiority, not necessarily excluding Greek, as will appear hereafter, but taking precedence of it. And this is, perhaps, a proper place to remark that, as it is, in my mind, a matter of the highest importance to retain Latin as an educational subject—and by "retaining" it I mean, to provide that it shall be learnt by the largest number of people for the longest part of their school-years—there would seem to be little or no gain in offering an artificial impediment to the study of Latin by insisting upon a correct, or what is at the best only a semi-correct, pronunciation. It is the great point that Latin should remain as a general educational subject; it matters little, if at all, how it is pronounced. For the time is past when even scholars of different nations would converse in Ciceronian Latin; it is much better for them to converse in French or German.

But, again (to leave this branch of the discussion), it must not be thought that, in prescribing natural science as a subject suitable to the early years of life, it is natural science conceived in an exalted sense. It would be unnatural to confine young boys in a laboratory. But the study of natural science begins out of doors. What I mean is that children should be familiarized, even before going to preparatory schools* and while they are there, with the names of flowers, the habits of birds, the elementary physical laws, the positions of the stars. That is just the teaching which can be given most easily and will be remembered most permanently. It will establish a sympathy between teacher and learner. At a later age the boy will study science scientifically. But even then, unless, indeed, he is gifted with an aptitude for scientific study, unless it is worth his while to spend a great deal of time upon scientific work, he will limit himself to a few—to two, or at the most three—scientific subjects. Every boy, then, will, at some time or other of his school-life, learn two such subjects; few boys will learn more than two. And it would seem desirable that of these subjects one should be such as will elicit his powers of observation, the other such as admits of immediate verification by experiment. May I suggest botany and physics as the subjects best possessing these qualifications? They are two of the three subjects recommended by a committee of the Royal Society which reported in the year 1867 upon the teaching of natural science in public schools.

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*In England the term preparatory school is applied only to private schools which receive as boarders very young boys to be prepared for the great endowed public schools like Rugby, Harrow, Eton or Winchester. These preparatory schools rarely receive boys after the age of eleven, though they may retain those already entered for one or two years beyond that age.

Having, however, in this way determined the subjects of primary educational interest, I am in a position to give an answer to a question which arises at once upon a consideration of educational reform. The position of Greek—the Greek question, as it may be called—is hardly less difficult in the educational field than in the field of politics. But, if Greece is advancing her claims in the one case, it may be said that she is withdrawing them in the other. It is necessary to ask, from a theoretical as well as from a practical point of view, and as considering, not only what is possible, but what is best,—Ought Greek to be a primary or a subordinate subject in education? Should it be the educator's object to encourage the study of Greek as widely as possible among his pupils, or should he recognize that Greek is becoming, and ought to become, the study of a minority?

It must be admitted that this question is complicated by the relation of the public schools to the universities. It is the universities which maintain Greek in its present position. So long as a knowledge of Greek is required for matriculation, or for some indispensable examination of the university, it is probable that the study of Greek will retain its importance in the schools. Schoolmasters are not altogether free agents in education; they are controlled by the homes from which their pupils come and by the universities to which they go. And the action of the universities affects a lower educational ground than may be supposed; it lends to Greek, as a subject required for admission to the schools, much the same weight that it already possesses as a subject required for admission to the universities. It is difficult, therefore, to say with certainty what would be the action of schoolmasters in respect to the study of Greek if they were left to act freely. But there are evident considerations which point to the gradual subordination of Greek. I do not mean that the boys who study Greek will study it less exactly or effectively. I mean that the number of boys who study it has already been, and will be, diminished. It will not, I think, be denied that the simultaneous study of two dead languages (besides all other subjects) is a burden too heavy for some youthful minds. It would be a distinct gain if some such boys as in past years have left school without knowing anything that is worth knowing of either Latin or Greek could leave it with a tolerably assured knowledge of one language. Nor, again, will it be denied that some boys who are not altogether incapable of mastering two dead languages may yet spend their time more profitably than in learning Greek. It would be perilous to augment the number of primary or fundamental subjects as already defined. Greek has been, so to say, driven out of the field as a study indispensable to education by a variety of circumstances, which may be regretted, but which cannot be ignored — by the increasing demands upon boys' time, by the multiplicity of educational subjects, by the competition of life, by the practicality of educational views, by its own difficulty, by the importance of other branches of learning. If Greek is taught, the intellectual demand which it makes is often so serious as to exclude a good many other subjects; and to some boys other subjects are worth more than Greek. The need of the present day is not that all men should know Greek, but that all men should, if possible, be familiarized, by books of translation, interpretation, and criticism, with the characteristics of Greek thought and literature. The study of such a work as the Master of Balliol's translation of the Dialogues of Plato does more to Hellenize the minds of the contemporary world than a large expenditure of time upon the Greek language.

Greek being, then, a secondary subject in education — *i. e.*, a subject which will not be universally learnt — it becomes necessary to determine what boys are capable of profiting by the full classical education, of which both Greek and Latin will be constituents. If it appears that the element of classicality is wanting to a boy's mind, it will be natural to deter him from sacrificing time and energy upon a study so difficult as Greek. If, on the other hand, it appears that his capacities, or possibly his circumstances and duties, are such as tell in favor of a classical education, he will be led to begin and continue the study of Greek.

The necessity of this option will be admitted as soon as it is recognized that Greek is not a subject to be imposed upon all boys. There will be an obvious advantage in deferring it to as late a period in a boy's life as is educationally convenient or possible. And the person who can best guide him in exercising it — unless, indeed, it be his parent — will be some one who is interested in him, who knows him well, and who is qualified, as a specialist, to pronounce upon his educational needs and opportunities. But such a person will be generally his tutor in his public school.

We must consider, then, this option in its relation to the curriculum of a public school. — *Contemporary Review.*

ARNOLD AND ARNOLDISM.

OSCAR BROWNING.

Some time ago an advertisement appeared in a daily paper to the following effect: "Wanted, in a grammar school, a master, of the good, hearty, Arnold type; to be the companion of the boys in the playing-field as well as the class-room." I forget the salary mentioned, but it was something moderate. This made clear to me what I had long observed — that the Arnoldian legend was growing in the public mind to be something quite different from Arnold himself, and that "Tom Brown's Schooldays," carelessly read, was driving out the effect of Stanley's "Life," carefully studied. Nothing, indeed, can be more different from the real school life of Dr. Arnold than that of the "cricket-master" or football-master of the present day — nothing can be more removed from the *camaraderie* which is now common with excellent results between the younger masters at many public schools and their pupils, than the stiffness and distance which was thought essential to the usefulness of even the youngest schoolmaster fifty years ago. It is not without good reason that Arnold's career at Rugby is taken as a turning-point in English education, and that his name has been adopted as a symbol of educational reform. He has changed the face of public-school education in England, as Provost Hawkins predicted that he would, although much has been done since which he never contemplated, and much of which he would never have approved. Still, the essential points of his personal influence are in danger of being forgotten. I will try to recall them.

In the first place, he showed that a man of first-rate powers, fitted for any position in the state, was not thrown away on the work of a schoolmaster. After the close of his career and the publication of his life, it was impossible for anyone to feel that even the highest powers could not find scope in the work of a headmaster. School teaching, once despised, and only considered tolerable as an adjunct to the clerical office, is now reckoned on a level with other learned professions, and daily attracts new power into its circle. Secondly, he introduced into schools a new and higher tone of morality. It had been considered best to leave boys to themselves, to trust to self-government, and to punish only what was found out. Enforcement of prayers and religious instruction was regarded as "cant." A late marquis used to say that the only preparation for confirmation which he received at school was what his private tutor said to him on the morning of the ceremony, "I suppose you know what all this means?" Arnold's school sermons were essentially missionary in their tone, and recent schoolmasters have found them too stern and severe to deliver to boys under modern conditions. Still, they were able to impart a sense of the religious life which was then spreading over England, but had not as yet reached the school. In the third place, he inspired the subjects of the old classical curriculum with a new reality. His deep interest in history, his grasp of all that was living and actual in the authors which he taught were the springs of a literary stimulus, the effects of which frequently lasted through life. After reading St. Paul's denunciations of the sins of the heathen he would turn to his Horace and say, "Let us now see what this ancient world was like." In the fourth place may be mentioned his individual knowledge of boys, which although common in the schools of the Jesuits was then probably rare in English public schools. He is said to have known every boy in the school, his appearance, his habits, and his companions. This intimate acquaintance with separate characters has been the source of much that makes modern education superior to that which preceded it. Consequently the name of Arnold will ever be held in honor, and, as generations pass away, he will be regarded more and more as the founder of the modern type of secondary education.

Still, there are deductions to be made. Arnold had little or no aesthetic taste. He writes in reference to the Piccolomini library at Siena that his correspondent cannot expect him to care about these things. He was outwardly harsh and stern, and only those who knew him well discovered that he had within him a fire of glowing sympathy. Further, the opinion about him at Rugby, amongst his pupils, was not always favorable. Professor Conington used to say that he never liked Arnold, and thought that he had grave faults as a schoolmaster. He considered him to be unjust in his punishment and related the following incident. One day a man with a basket of plaster casts was passing through the school yard when a number of boys broke the casts with stones, giving the man little or no compensation. Conington was a monitor at the time, but was not aware of the occurrence until after it was over. Notwithstanding this he was severely rebuked, and, I believe, punished by Arnold. A boarder in Arnold's house, now a distinguished member of the Upper House, relates that the fare and treatment in the schoolhouse was very rough. The oaken table had no table-cloth. The boys were only allowed one plate for meat and pudding, which they ate on different sides of it; their knives were wiped on the iron rim which encircled the table. The discipline was almost entirely in the hands of the sixth, whom Arnold always supported, whether they were right or wrong. He knew very little of the boys in his house unless they were intellectually distinguished. Arnold's conversation with the boys was always on intellectual topics, and his sympathy with games was confined to occasional and hasty visits to the school close. Sir W. P. Adam once told me that, as a small boy at Rugby, his feeling toward Arnold was purely one of terror, and that he never could forget the effect of the great black man, in a black silk gown with swelling sleeves, thundering forth his minatory sermons. The last time I spoke to Dean Stanley he told me that as a boy his prevailing feeling towards Arnold was one of awe, and that he never lost this feeling until the end of his life. The Arnold thus depicted is very different from the "good, hearty type" of which the advertisement spoke which I have quoted above.

In conclusion, we must consider how far the differences between the modern public school and that of fifty years ago are to be referred to the influence of Arnold, and how far they are not. The salient divergencies in the two systems appear to be these. There is now a greater reality of discipline and a higher moral standard. In old Winchester there was a dormitory in which a number of boys slept. At a certain hour they were supposed to be quiet and peaceful in their beds, when, as a fact, they were reading or playing cards, or engaged in other unlawful occupations. The dormitory was periodically visited by the headmaster, accompanied by one of the head boys. Some time before they reached the room the boy pulled the wire of a bell, which hung on the wall outside, and gave due notice of their arrival; so that when the inspector appeared on the scene, everything was in order. Similarly when Hawtrey, as headmaster of Eton, used to inspect Long Chamber, Finmore, his servant, was expected to rattle his keys loudly in the passage, so that no disturbing sight might meet the eyes of the Doctor. The 4th of June regatta was celebrated at Eton in Keate's time, and the boys returned from it late for "lock-up." Keate professed to know nothing about it, although his wife was probably one of the spectators at the procession. This system struck at the root of all true morality. The monitorial system at Eton went upon the principle that the big boys might do what they liked so long as they prevented the small boys from transgressing the rules—just as the traveller in the desert pays one set of robbers in order that they may protect him from the rest. Arnold insisted, perhaps even too strongly, that greater power implied greater responsibility, and punished a sixth-form boy more severely than those over whom he ruled.

Again, a greater reality was introduced into education. The study of things was combined with the study of words, and less stress was laid on the performance of mechanical tasks than of the mental efforts developed in the process of learning. Also Arnold, although in many respects cold and unsympathetic, paved the way for the downfall of "donnishness," which has done more than anything else to establish genuine discipline and a well-founded respect between the teacher and the taught. Our old pedagogues were very pompous, and were often great bullies; but boy-nature sometimes took its revenge in startling fashions. I have been told by an eyewitness that the terrible Dr. Keate, who flogged half the peerage of England, who once executed the fifty ringleaders of a rebellion between sunset and sunrise, and once scourged by mistake a number of candidates for confirmation, while he nearly sent the malefactors to be confirmed, was often pelted by heavy books as he descended the staircase of upper school, and had to run for his life from the assaults of the fourth form. Arnold discarded these shams of discipline, as he discarded other shams, and paved the way for a familiarity which he could not himself have initiated.

On the other hand, the most salient characteristic of modern public schools is the reception of games into the curriculum on an equality with work — if not into a superior position. Of this Arnold would entirely have disapproved. He would have seen that it ministered to a lower standard of effort; that it vulgarized intellectual labor by making it an affair of competition and prizes instead of a work of love; that it substituted self-indulgence for self-denial; and that it placed those boys in positions of command and influence who were frequently most unfit to exercise either the one or the other. Lastly, he was the inventor of the school sermon, the main effect of which has been to perpetuate the clerical headmaster. There are many names in the last fifty years which deserve to be placed by the side of Arnold. It is a pity that the lives of Hawtrey and Edward Coleridge have never been written. But mankind prefers a type to a character. It is useful to separate Arnold from the Arnoldian legend, so that we may cease to quote his authority in defence of courses of which he would never have approved; but he would be no friend to education, who would seek to diminish by one single ray the aureole which encircles his venerable brow.— *Education* (*London*).

RECENT FRENCH LEGISLATION ON PRIMARY INSTRUCTION.

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STATE systems of education are, as a whole, a comparatively recent growth. They arise, undoubtedly, from a feeling akin to that which disturbed the breast of Maud Muller on that long-gone summer day,

> " A wish that she hardly dared to own
> For something better than she had known."

Certainly there is combined with this in the educational world " a vague unrest." This is particularly noticeable at present in Germany, where her highly elaborated system is receiving some very earnest criticism from leaders in educational thought. France, applying her remarkable facility for forming constitutions to the elaboration of a state system of public instruction, has within the past ten years established one of the most recent as well as one of the most complete of such systems. If we would not forget that progress is only to be maintained by keeping ourselves in relation with the best thought and the best ideals developed elsewhere, if we would not forget that "there are people on the other side of the mountains also," it might be well to consider somewhat carefully the doings of some our neighbors over the sea. Our principal authority for the facts here given is the recent work of Carrive entitled, *La Nouvelle Législation de l'Enseignement Primaire*, a collection of the laws, decrees, orders, circulars, and programmes concerning primary instruction, accompanied by a very satisfactory commentary upon the motives of the whole. The materials for a thorough understanding of the system are abundant, as will be readily seen by any one consulting the catalogues of the French educational publishers, especially those of Hachette and of Delagrave.

Until the Revolution of 1789, but little attention was paid by the government of France, or little aid given by it, in the matter of primary instruction. The schools were comparatively few in number, and but slightly attended; there were scarcely any lay teachers, and those without solid education and degraded, as they themselves expressed it, by their inferior situation; few or no elementary books; free tuition was almost unknown; and a general indifference toward elementary education prevailed. The higher education has always enjoyed comparatively great advantages in France. But, in order to maintain the principles on which the Revolution was based, it was plain to thoughtful men that the people as a whole must be lifted to a higher plane of educational life, and the convention at once set itself at work to accomplish this desired result. On the 19th of September, 1793, a decree on the organization of public instruction ordered the creation of primary schools throughout the whole extent of France, with the obligation resting upon all fathers, mothers, and guardians to send their children or wards to these schools, under penalty of fines and, in case of a repetition, of privation of their civil and political rights during ten years. But the confusion in France at this time was too great to allow anything to be established on a stable basis. This law was soon replaced by that of the 17th of November, 1794. The requirement of compulsory attendance had caused a reaction very quickly. In the same year the law was passed which established the now world-famous *Ecole Polytechnique.* In the year 1795, the first French normal school was opened with such eminent masters as Lagrange, Laplace, Berthollet, Monge, Sicard, La Harpe, and with fourteen hundred pupils pressing to the courses there given, but the school was closed after three months. Other laws were passed creating primary schools in each canton and central schools in each department, but ignorance was too dense and political agitation too violent to permit educational matters to make much progress. From this time forward, however, under the First Empire, the Restoration, the Orleanist Régime, and the Second Empire, more attention was paid by the government and by the most eminent statesmen to the subject of primary instruction. But though new schools were opened, the school-houses improved, the salaries of the teachers raised, and the training of teachers in the normal schools encouraged, yet the primary school did not make the progress which was desired, because the funds were lacking in many of the communes and attendance was not compulsory. In a circular to the prefects, dated October 30th, 1854, the Minister of Public Instruction thus describes the state of school attendance in some departments: "In spite of the constant efforts of the higher administration, the number of children who remain strangers to all instruction is truly distressing. One-tenth of the whole population should be found in the schools. There are some departments in which the pupils still form only a twentieth, a thirtieth, or even a fortieth of the population. This is not all; of the number of children who fill the school lists, many leave the classes during five or six months each year. These children, after two or three years of a purely nominal attendance at school, are almost completely deprived of all intellectual and religious education." The law of 1850, one of the great landmarks in French educational progress, had been passed four years before.

This state of affairs has been changed by the changed state of public opinion as seen in the new legislation. Out of a total population of about thirty-six millions, nearly six millions are in either the public or the private schools. After the great reverses of 1870, the thoughts of many earnest French statesmen, not ashamed to profit by the lesson taught by their German conquerors, were turned with yet greater seriousness to consider how school attendance might be fostered, public opinion aroused, and public education be put on to the high plane it occupied in neighboring countries. The result is the new system, established not without great opposition because some of the changes are very radical, and having hardly yet passed its trial stage. It has in it all the elements of a vigorous young growth.

The new legislation rests on the triple base of free tuition, compulsory attendance and the lay character of the programmes and of the teaching force. The law of the 16th of June, 1881, established free tuition; that of the 28th of March, 1882, compulsory attendance and the lay character of the programmes or courses of study; that of the 30th of October, 1886, the lay character of the teaching force. Yet the father always remains free to give his children primary instruction in such a way as shall seem best to him. He may give it to them or cause it to be given to them at home or in private schools; he is not required to send them to a public school. It is the *instruction* which is obligatory, and not the *school.* In organizing *public* instruction the state puts it freely at the disposition of those who wish to profit by it; it does not impose it. Although the law regarding free tuition was passed before that concerning obligatory attendance, yet the latter is the fundamental principle; free tuition and the lay character of the courses of study have been the more or less logical consequences and corollaries of it. The theory of universal free instruction still remains subject to debate; the obligation on the father to give his child the minimum of instruction which the law determines is not so; it forms the *unshaken position* of school legislation.

After having established this principle, the law should indicate what the subjects included in this compulsory instruction are. The law of 1882 opens with a statement of these subjects, as follows: —

Art. I. Primary teaching comprises: —

Moral and civic instruction;
Reading and writing;
The French language and the elements of its literature;
Geography, particularly that of France;
History, particularly that of France down to our own time;
Some common notions of law and of political economy;
The elements of the natural, physical, and mathematical sciences; their applications to agriculture, to hygiene, to the industrial arts; manual labor and the use of the tools of the principal trades;

The elements of drawing, modeling, and of music;
Gymnastics;
For the boys, military exercises;
For the girls, needlework.

In addition to this the public primary schools are closed one day (generally Thursday) each week, besides Sunday, in order to permit parents to cause religious instruction to be given to their children, if they wish, outside the school building.

This programme of studies for the public schools is necessarily a maximum of teaching, in the sense that the teacher is not allowed to add new subjects, and it is at the same time a minimum, in the sense that all these subjects of instruction are obligatory.

This programme applies, however, to the public schools only. The directors of private primary schools are entirely free in the choice of methods, programmes, and books, except that they must not use books proscribed by the superior Council of Public Instruction. The inspection of private schools by the various agents of the state extends only to morals, hygiene, sanitation, and the provisions which secure attendance at school. The same freedom is granted in the case of instruction at home.

The question may naturally arise here how the right of option as to the choice of schools may be exercised by the parent. The law provides that every person having the care of children shall, fifteen days at least before the opening of the school year, report to the mayor of the commune whether he intends to have the child taught at home or in a public or a private school; in the last two cases he will indicate the particular school chosen. So also when a child leaves a public school the parent must give immediate notice to the mayor and indicate in what way the child will receive further instruction. Further, each year the mayor in connection with the local school commission draws up a list of all the children of the commune between six and thirteen years of age, and notifies the persons who have charge of these children of the date of the opening of the school, usually October 1st. In practice, however, this is considered as not applying to those children who are already enrolled in either a public or a private school. In case of no declaration by the parent or person responsible for the child at the proper time, the mayor enrolls the child in one of the public schools and sends notice of that fact to the parent. Provision is also made that children taught at home shall be examined yearly, after they are eight years of age, on the subjects of instruction which children of their age in the public schools are engaged upon. The examining committee for this purpose shall consist of the primary inspector or his substitute, a cantonal delegate and a person provided with a university diploma or a brevet of capacity. In the examination of girls the last mentioned person must be a woman. If the result of the examination is satisfactory no question is raised; but if unsatisfactory and without sufficient excuse, notice is sent to the parent that the child must attend either a public or a private school.

The requirements of this fundamental and radical law concerning school attendance impose obligations upon several different parties; the mayors, the parents, the teachers, and the school committees. In addition to the notice sent to parents, the mayor should send to each director of a public or a private school a list of the children who are to attend his school. This list is necessary to the directors in order that they may fulfil the obligations imposed upon them by this law.

The government furnishes to each teacher a school register in which all absences are recorded. It is the duty of the teacher to inform himself of the cause of all absences, either by questioning the children, or by inquiring of the parents themselves personally or by letter. He records in the register the reasons assigned, if there are any, or the absence of explanations. The teacher does not judge as to the sufficiency of the reasons presented, he merely records them. At the end of each month he sends to the mayor or to the primary inspector an extract from this register. Each of these extracts should contain the names of the children who have been absent, the names and residences of the persons having charge of them, the number of absences, the reasons assigned, and any remarks that the teacher may think best to make. It is by means of these reports that the mayor can refer infractions of the law to the competent authority, i. e. to the school committee, and that the primary inspector can exercise his oversight. Every director of a private school must make a similar report to the same authorities under penalty of warning, censure, suspension for a month and, in case of a repetition of the offense during the school year, for three months.

The school committees are in some sort the principal machinery in the organization of compulsory instruction. They were establishedby the law of 1882 in imitation of the similar committees in England and in the United States. Their especial function is to familiarize the people with the requirements of the law and to make it acceptable. Their composition and powers differ much from those of this country. Each committee consists of three sorts of members; members ex-officio, those appointed, and those elected. In the first group are the mayor or his substitute, and the primary inspector; in the second group are the cantonal delegates, generally one on each committee, charged with the inspection of the schools of the commune; in the third group are the members elected by the municipal council, their number being at most equal to one-third of the members of the council. Foreigners, women, bankrupts, persons interdicted by law, public officers whose duties are incompatible with such service, clergymen connected with some legally recognized worship, are ineligible for membership. The cities of Paris and Lyons have especial provisions as to the composition of the school committee. The duties of the committee are two-fold: besides facilitating the application of the law by a kindly and neighborly oversight, it can, in case of infraction of the law, inflict certain penalties. It assists the mayor to draw up the list of children of school age, it decides upon requests for temporary absence from school, it divides the resources arising from the school fund for the assistance of the poor or for rewards to the deserving, it considers the excuses presented by those children who have been absent four half-days at least in the preceding month. The legitimate excuses for absence are; the sickness of the child, the death of a member of the family, hindrances resulting from accidental difficulty of communication. Other exceptional circumstances are equally considered by the committee. In case of insufficient excuse the committee shall summon the person in charge of the child to appear before it in the registry office of the town hall. If the person cited presents himself, and gives an excuse, although insufficient, if it is a case of first infraction there is no penalty to be pronounced, but the provisions of the law are recited to him, and his duty in the premises and the consequences of subsequent infractions of the law are explained. The object of the Government is to have in each commune a sort of family tribunal in which offenders shall receive good advice and be led to do well without the application of severe measures which might make the law offensive. In case of a second infraction within twelve months, without sufficient excuse, the penalty may consist in posting, for fifteen days or a month, on the door of the town hall, the name and rank of the responsible person, with the fact charged against him. In case of further trouble, the school committee ought to bring a charge before a justice of the peace.

A marked difference between these powers and those of our school committees exists, as is shown by Art. 154 of the organic decree of January 18th, 1887, which says: "The members of the school committees have no right to enter the school. They have no right of inspection or control either over the establishments of instruction or over the teachers." They are required by law to meet at least once in three months. This was done in order that too frequent meetings might not render their gratuitous labors irksome. They are expected to meet oftener and may be convoked for special meetings by the mayor. Experience has not justified all the hopes based by the legislative department on this institution. Some committees have shown themselves hostile to the new law; some have met only to excuse all violations of it; and except in the larger towns and the cities, they do not work regularly. The desire of the government to cultivate in the people a respect for the law by having it locally administered, rather than by its own agents independent of the community, is the cause of this state of affairs. It is the feeling of the statesmen who have the glory of France at heart that this principle of school attendance must be fostered by all the means in their power. The Republic has many enemies. Its policy is to conciliate them and strengthen itself in the hearts of the people.

With the experience of the world for their guidance and with an earnest desire to secure the best system that can be had, the French legislators have decided that primary instruction shall be given in the following kinds of schools: maternal schools, and infant schools; elementary primary schools, the principal part of the group; higher primary schools and complementary courses; apprentice schools of manual training.

The maternal schools are establishments of first education where children of both sexes receive in common the care which their physical, moral and intellectual development requires. Children may be admitted at the age of two years and remain until six. They must be in session throughout the year except Sundays, several holidays, and the first fortnight of August. Instruction is given in accordance with a general programme contained in the organic decree of January 18th, 1887, and is laid out minutely in a special programme prepared by the Minister of Public Instruction, in which the work to be done each month in general lessons is carefully specified.

The infant schools are "the ring which binds the maternal school to the primary school." Children of both sexes are admitted from four to seven years of age. These schools can exist only as annexes of maternal schools or of elementary primary schools. Both maternal schools and infant schools are established only in the larger communes where the number of small children will warrant.

The rules relating to the establishment of the elementary primary schools, to the school houses and to the school material, to the teaching force, and to the matters taught, form the subject of Chapter II., title I. of the decree of January 18th, 1887. These schools are open to children from six to thirteen years of age. If there is a maternal school in the commune, the child may attend it until six years of age; if there is an infant school, he may attend that until seven.

The superior primary schools take the name of "complementary courses" if they are annexed to an elementary school and placed under the same direction. They are called superior primary schools if they are installed in their own houses and under a different master from that of the elementary school. The course of study lasts two years as a rule. To be admitted to them an applicant must be provided with the certificate of studies given to those who have passed a satisfactory examination on the studies of the elementary school.

The apprentice schools receive children provided with a certificate of studies, or at least thirteen years of age. Every matter relating to all these kinds of schools is provided for by the law or by decrees, orders, circulars, and programmes prepared by order of the Minister.

Those who teach in the primary schools must fulfil two groups of conditions; those of nationality, age, sex and morality, and those of capacity and diplomas.

The general rule is that no one can teach in a public or a private school who is not French. It admits of some exceptions in the case of private schools, under the conditions that the applicant has been admitted to enjoy civil rights in France and has received the authorization granted by the Minister of Public Instruction. This last condition can apply only to a designated school; in case of a change of situation a new authorization to teach must be obtained. Besides these two especial conditions foreigners should fulfil the same conditions as Frenchmen, and particularly those relating to the brevets of capacity. The French equivalent of the foreign diploma is determined at present by the Minister. The minimum age for teaching in the maternal schools or the primary schools is seventeen years for women and eighteen years for men; to direct such a school the age is twenty-one for both sexes. Where the number of children is sufficiently large there must be a separate school for each sex. In the schools for boys the teaching must be done by men; it is done by women in the maternal schools, the infant schools, girls' schools and in mixed schools. This general rule, as so many others, has exceptions allowed by law, e. g. women may be admitted to teach in the boys' schools as assistants on condition of being wife, sister, or relative in a direct line of the director of the school, or by authority of the departmental council. By the same authority a man may direct a mixed school, having a female teacher of sewing as assistant.

The teacher must also be provided with one of the titles of capacity. These are the elementary brevet, the superior brevet, and the certificate of pedagogic aptitude. Other educational certificates are the certificates of professional aptitude, of aptitude for a professorship in a normal school, of aptitude for the inspection of primary schools, for the direction of normal schools, for the inspection of maternal schools. In addition to these general brevets and certificates there are special certificates for accessory subjects, such as the certificate of aptitude for teaching living languages, for teaching manual training, music, etc. A candidate for the elementary brevet must be at least 16 years of age; for the superior brevet, 18 years; for the certificate of pedagogic aptitude, 21 years; for the certificate of aptitude for inspection of primary schools, 25 years. The subjects of these examinations, the times and places of holding them, the composition of the examining committees, even the manner of marking the tests, are all duly provided for by law. Nothing is left to chance. Favoritism is guarded against as far as possible, by leaving nothing to the decision of any one man. The regular examinations for the two brevets of capacity are held twice a year in each of the 86 departments of France, in July and October, the precise date of each being fixed at least a month in advance by the Minister. A candidate for the higher brevet must have already obtained the lower. The written examination is not public; the oral examination of male candidates is public; only women are admitted to the oral examination of female candidates. Most examinations involve three series of tests on the subjects to be taught, a written, an oral, and a practical. These tests are marked from 0 to 20, except gymnastic exercises and music which are marked from 0 to 10. The mark 0 in any one of the tests is decisive of failure. On the average less than fifty per cent of the candidates pass the examinations.

At the end of each school year an examination is held on the same day in all the departments for obtaining the certificate of higher primary studies. There are examinations also in the cantons, or in the central communes, for the certificate of elementary primary studies.

Whether this high pressure system is adapted to the genius of the French people cannot thus early be determined. It would seem that they would weary of it and plan a return to simpler methods, as already many Germans are doing. No such elaborate system as this was probably ever before so quickly planned and put into operation. We await with interest the result.

Teachers are divided into two classes according to their certificates, probationers and titulars; the latter must have the certificate of pedagogic aptitude. All titular teachers are nominated by the Inspector of the Academy and appointed by the Prefect of the Department. These two officials must therefore agree to every appointment made; they must also agree to every removal. Probationers have only a provisory title, called a *delegation*, granted by the Inspector of the Academy on the advice of the primary inspector; this authority may be withdrawn in the same way. This is considered a sufficient guarantee against arbitrary measures.

Teachers of the primary schools are subject to certain disciplinary penalties, pronounced by the departmental council on information filed by the Inspector of the Academy. These are reprimand, censure, revocation, temporary or absolute interdiction; but the accused is always granted an opportunity to defend himself. There are at the same time certain honorary rewards for ability or faithful service. These are honorable mention, medals of bronze, and medals of silver.

Teachers are forbidden to engage in any mercantile or industrial pursuit, to perform any administrative function, to act as organist or to sing in any church. They are exempt from the obligation of military service on binding themselves to teach for ten years.

After the 30th of October, 1891, none but lay teachers will be allowed to teach in any schools. In order to provide a sufficient number of such teachers a normal school for men has been established in each department, and also one for women in all but a very few. Two higher normal schools to train teachers for the primary normal schools were also established, one for women at Fontenay-aux-Roses, the other for men at St. Cloud. In the normal schools everything is free to the pupils, including board, and each receives an annual grant of about 250 francs for traveling and other personal expenses.

The expenses of primary instruction are divided between the state, the departments, and the communes. As the teachers are state officials the state fixes and pays their salaries, as well as those of the personnel of administration and inspection, and kindred expenses. The departments provide and maintain the normal school buildings, and pay the expenses of the departmental service of public instruction, and other definitely determined expenses. The communes provide the primary school buildings and maintain them, a house for the teacher or a cash indemnity, school furniture, and similar necessities. The local school committee has charge of the buildings but not of the instruction or instructors. The titular teachers are divided into five classes; the salary of the lowest class is 1000 francs, that of the highest class 2000 francs per annum with a residence or indemnity fixed by law.

At the head of the department of public instruction is the Minister. The authorities charged with the duty of inspection are of two kinds, the University authorities, depending directly on the Minister, and authorities elected or nominated outside of the University. The first group consists of the general inspectors of public instruction, the rectors of academy, the inspectors of academy, the primary inspectors, and the general and departmental inspectors (women) of the maternal schools. These have a general right of inspection. Besides these, the members of the departmental council, the mayors, the cantonal delegates, and in a medical point of view the medical inspectors of the communes or the departments, have assigned duties to perform. In the last group the departmental council, from its varied composition and its important duties, holds the most prominent place. By means of the reports of these different officers the government is kept informed of the state of affairs, both locally and in the country as a whole, and can take such measures as seem advisable to perfect the system.

It is plain that an immense stimulus has been given to all matters connected with public instruction. Educational literature for the information of the public, for the use of officers of instruction, manuals of every sort for the use of teachers, school-books in almost countless variety and number, have issued from the press during the past ten years. The work of the teachers in every subject has been carefully elaborated in general or special programmes. Even in many of the text-books the amount to be covered each month is specified, conformably to these programmes. If the teacher is, after all, the school, then the training, the examinations, the inspection, the advice, to which these teachers are subjected should put the schools of France in a high rank. If perennial political agitation shall allow this system a fair trial, the result will be of great interest to the rest of the civilized world. The stability of the Republic depends on an enlightened public opinion. The Republic is endeavoring to arouse and maintain that in its public primary schools. All lovers of liberty will hope in its ultimate success.

THE MODEL NORMAL COLLEGE.

J. W. MACDONALD, STONEHAM HIGH SCHOOL.

WHATEVER may be said of the policy of educating students for the teaching profession at the public expense while allowing those for other vocations, as for example law and medicine, to get along by their own perseverence and pocket, the public normal school has come to stay. It must be defended, however, on different ground from that usually taken, namely, that if it is the duty of the state to educate all its children, it is also its duty to provide competent teachers. If this is not a *non sequitur*, it proves too much. For by the same reasoning, if it is the duty of the state to attend to the welfare and happiness of its citizens, then it is also its duty to provide competent doctors, lawyers, ministers, carpenters, tailors, plumbers, cooks, base-ball players, etc., and schools for the training of all these should be at once established. Carried to its logical conclusion, it would not merely make the state parental, but an exceedingly indulgent grandmother.

The argument for the public normal school rests on a corollary to what is known in economics as the law of demand and supply.

People generally have such a horror of death, and such awe of the intricacies of law, that they are pretty sure in time of trouble, to seek the best services their means will afford. I am not unaware of the abundance and prosperity of quacks in both law and medicine, but I am persuaded that they get their support in the one case from those who are sick only in imagination, or are hopelessly sick, and in the other from those who get into legal trouble from pure ugliness. The statement as I have made it, is substantially true.

Not so in educational matters. But few people appreciate the difference between good and bad teaching, provided it is not intolerably bad. What shrewd old Roger Ascham said more than three hundred years ago is, in the main, true today. "And it is pittie that commonlie more care is had yea and that emonges verie wise men, to find out rather a cunnynge man for their horse, than a cunninge man for their children." The great majority of people estimate a teacher more by his social qualities than by the practice of his art.

The consequence of this is that a young person of brains and pluck may go to considerable expense for an education in law, medicine, or almost any other calling, with a reasonable certainty of finding a remunerative patronage, while he who would go to the same expense for professional training as a teacher, might not find his chances appreciably improved, if, in fact, his "having ideas" did not prove a positive obstacle. He could probably have secured a position in less time and at less expense, through "*influence*" or a teachers' bureau, than through a normal school.

While, then, the support of law schools, medical schools, and other institutions for professional training may be safely left to those who will seek them as the way to fit themselves for positions that they cannot otherwise secure, the normal school must coax would-be teachers to qualify themselves for positions that they otherwise could more easily secure. In other words, they must induce students to fit themselves better than they need to, to fill positions better than they will be asked to. In still other words, a comparatively few progressive educators, who understand the importance of right methods in teaching, are upholding free normal schools to train teachers to a degree of professional skill that will not be appreciated by either pupils or parents.

It is evident, therefore, that it is what seems to leading educators a necessity, and not a popular demand, that normal schools are to meet. It ought to be said, however, that intelligent supervision, and a progressive class of headmasters, (when permitted to be heard) are creating a demand for professionally trained teachers, but as yet the demand is comparatively limited. Until it becomes more widespread, to induce young men and women desiring to become teachers to qualify themselves professionally, the way must be one of the least possible resistance; the tuition at least must be inexpensive.

It may be urged against making this way easier than the way to other professions, that by the law of the resort of the unfittest, there would be a great rush of inferior material into this one. But this is preëminently the evil of the present practice that requires no professional qualification, and is now at its maximum. Whatever influence, therefore, a normal college would exert must be healthful.

It will be understood, of course, that in what I have said, I have mainly referred to college graduates, or those having a sufficient academic education, who desire to become teachers in secondary schools; and that the object of this paper is to set forth a practical plan for enabling, or rather leading, them to supplement their academic learning with a degree of professional knowledge.

The present normal schools of the United States are mainly devoted to fitting teachers for positions below the high school. They are all organized after the same general plan; that is, a two years' resident course, a large part of which is devoted to mere academic instruction. In this last respect there are a few exceptions, as for example, the Boston Normal School, but these few exceptions only emphasize the prevailing practice. Some of these normal schools have a supplementary course of two years, but this also is largely devoted to academic instruction.

Few will deny that the necessity (for such it seems) of mingling academic and professional training is an injury to the latter. In all such cases one of the ideas will inevitably predominate in the minds of the students and eclipse the other, and at the normal school age it is certain to be the academic. Students of that age more sensibly feel their ignorance of facts than their need of professional methods, and will magnify the work which supplies the want. Correspondingly they will lessen the value of the other. It is pretty safe to say that most normal graduates remember their institution mainly as an academy. The more scientifically they were taught, the stronger this impression is likely to be.

The normal schools themselves are by no means to blame for this condition of things and I have no doubt that the best of their principals would hail a deliverance from it with joy. But the way out is far from clear as yet. To get popular support they must be democratically accessible. This means that in admitting students, as in political appointments to our civil service, fitness must not be too strongly insisted upon. The result is, for admission, an age rather than a mental qualification, as the more democratic, and hence too much academic work is forced upon the schools. Indeed, if it were not for the academic instruction, probably not one in five of the students attending these schools would be there.

On graduating they receive diplomas, and then are practically left to themselves. Is it strange that there should be so many relapses on the part of normal graduates, in the test of actual teaching, from the principles they have heard expounded? It is the first two or three years at the teacher's desk that is the critical period. It is these that practically determine whether the young teacher shall stand by her principles or mainly abandon them. Over these the normal school should extend its sceptre. It has a right to demand that an education accepted at the public cost should be lived up to.

With a high grade normal school drawing its students from college graduates, any exclusively academic work, could and should be avoided. If it may be said that some college graduates are not preeminently endowed with learning, it may be answered that it would be one of the functions of such an institution to weed out the incompetent. The vocation of colporter or book-agent is still open to them.

On the other hand, greater inducements, especially at first, would have to be offered to draw students. Whether this could be done against a remunerative charge for expensive tuition, is doubtful. It would seem that the more hopeful way would be a free public normal school, like those already existing, or an institution connected with some university but liberally endowed with free scholarships. At all events, it should be a distinct school of pedagogy. The plan of endowed professorships in the various colleges, seems to me unworthy, and a reason against it has already been given. The best that could be said for it, is that the chairs, or rather "settees," would probably be occupied by men who would render them harmless.

Granted, then, a separate public normal college, or a distinct department of a university. It should have a one year's resident course, supplemented by two years of actual teaching, to entitle the novitiate to the degree which it should be empowered to confer. To begin with, it ought to bestow this degree upon such teachers of the state (if a state institution) as had already, by their services in the cause of education, made themselves worthy of it, to be determined by a responsible commission. These should be enrolled in its catalogue, and should enjoy all the privileges of subsequent graduates. This would be an act of justice that would reflect weight and dignity to the institution.

For the resident year's course I would submit the following, based upon two terms of twenty weeks each: —

FIRST TERM (20 WEEKS).

1	Psychology,	20 weeks,	4 hours per week.
2	History of Education,	16 “	3 “ “ “
3	School Jurisprudence,	16 “	3 “ “ “
4	School Hygiene,	20 “	2 “ “ “
5	School Government,	20 “	2 “ “ “
6	Aims and Methods,	8 “	4 “ “ “
7	Discussions and Essays,	20 “	2 “ “ “
8	Lectures,	20 “	2 “ “ “

SECOND TERM (20 WEEKS).

1	Logic,	20 weeks,	4 hours per week.
2	Aims and Methods,	20 “	4 “ “ “
3	School Government,	20 “	2 “ “ “
4	Reviews of Educational Books,	20 “	2 “ “ “
5	Discussions and Essays,	20 “	2 “ “ “
6	Lectures,	20 “	2 “ “ “
7	Visiting Schools (reports),	20 “	1 “ “ “

For the second and third years the students would be visited in their schools and examined as already described.

One or two things in the above course may need a word of explanation.

It is the design of the study, Aims and Methods, to investigate *why* particular branches are in the school course; what educational purposes or results they are intended to accomplish; whether facility in use, as the elements of arithmetic, and reading or writing, or mental discipline, as geometry, or both; and by what method of instruction these objects can best be accomplished. This investigation made in the light of psychology and carried on through various branches, as drawing, arithmetic, language (English), geography, history, civics, the classics, modern languages, algebra, geometry, etc., could not fail to be of exceeding value. It would develop in the teacher a power to distinguish between correct and spurious methods in education.

School Jurisprudence is a study of existing school laws, and the science of the same, points which teachers have too much neglected.

Hygiene includes the study of ventilation and the mechanism by which it is accomplished. It is also concerned with the theory of physical culture and its relation to mental work, in order to avoid abuse in either.

School Government would be a study, not only of general school rules and regulations, but the treatment of peculiar cases of discipline. It would also include all considerations pertaining to the morals and manners of the pupils.

The Review of Educational Books would be a study, not only of books on pedagogy, but school books. The object would be to make such a review candid and thorough. It is not of course meant that each student should prepare two of these per week, but that twice a week they should be called together to listen to, and perhaps criticise such a review by one of their number.

Under Discussions and Essays the students would be assembled twice a week to discuss a paper prepared by one of them on some practical educational topic. We do not make enough use in our schools of the debate as a means of education. It was a prominent feature of the old Roman schools and much emphasis is laid upon it by Quintilian in Book II. of his *De Institutione Oratoria.* The discussion, to be sure, is capable of gross abuse, as for example when such absurd questions are introduced as were discussed by the schoolmen of the middle ages, or the one cited with disapprobation by Quintilian, *seviores tragicis novercas.*

The discussions contemplated above would not be liable to this error. Practical questions would be debated. A teacher competent for the task would preside who would hold the students (1) to parliamentary language and etiquette; (2) to a logical argument and a close adhesion to the subject, and (3) to a defence of their views by going to fundamental principles.

It is suggestive to notice the lack in this last respect, in the usual discussion at educational meetings. Not one speaker in three gets down under his subject. In fact, if a speaker does found his ideas on bottom principles and refuses to be converted by the "I think"'s and the "In my opinion"'s of his opponents, he is very likely to bring upon himself the charge of positiveness, if not of something less elegant.

The program contemplates a reasonable amount of time for visiting good schools where permission can be obtained, but makes no provision for practice teaching except such as the students get by conducting the recitations of the school itself. Feeling as I do, the inestimable value to immature scholars of a regular and constant teacher, I cannot bring myself to advocate the use of any outside school as a tinkering shop for novices. Besides, the subsequent two years spent in teaching, makes it unnecessary. Upon this I would insist as the vital part of the plan I have outlined. It is so regarded in the German training schools of which it is a feature, and might be profitably added to our present normal schools.

In closing let me say that I would have a catalogue of all the graduates carefully made out and sent annually to all the school boards and other educational authorities in the state.

*METHODS OF TEACHING PHYSICS.**

ALBERT L. AREY, ROCHESTER FREE ACADEMY.

At the beginning of any discussion of method it is useful to ask: What is the object of this study? What may we reasonably expect the pupil to gain by it?

I believe teachers are substantially agreed that the chief object of this, as well as of every other study, is the betterment of the pupil's mental machine, and that that subject and that method of instruction is best, which causes the greatest improvement in the average pupil.

The utilitarian value of the facts which the pupil acquires; the importance of an acquaintance with Nature's laws, and the methods by which they have been discovered, as a matter of general culture; and the habits of patient and conscientious study which may be cultivated; are secondary objects which may be justly claimed for physics, but they must take a subordinate place, when compared with its disciplinary value.

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* Read before the Associated Academic Principals of the State of New York at the Holiday Conference of 1890, and published in THE ACADEMY at their request.

It is not now my object to discuss the claims of physics to a place in secondary schools; hence it is neither necessary to compare its advantages with those of other subjects, nor to show that in the matter of discipline alone it is the full equal of any subject taught. The time was when such discussion was necessary, but it has passed, and now all just claims are nearly everywhere admitted.

There is perhaps no subject which offers a greater variety of methods than physics. I think it may be safely assumed that there are schools in the United States representing every method from the "pure lecture" at one extreme through the "pure cram" to the "all laboratory practice" at the other extreme.

As one looks over the various methods mentioned, it seems that the lecture system is not the best, since it relieves the pupil of all mental exertion, save perhaps the exertion necessary to remember what was said.

The text-book method presents a variety of phases; some are good, others bad. The teacher, who, at the beginning of the lesson, says, "John, you may begin," and who corrects any variation from the text with "Well, if you can improve upon the language of the author, you may. otherwise you had better stick to the words of the book," will do little for his pupils, while the teacher who lays much stress on the mathematical portions of his work, and who keeps the "why" of things constantly before them; who explains clearly why each law and fact is accepted, and upon what celebrated experiments it rests, whose pupils can answer the question, "Why do you believe this law?" may do much for his class.

I am aware that there are those who claim that no instruction in physics is valuable unless it consists chiefly of laboratory work. I am also aware that many teachers will class my remarks as heresy, when I say that I have no patience with this kind of instruction, and, from my observation of the results obtained, I do not hesitate to characterize it, in its extreme form, as the poorest method; — the students are weak in theory, and obtain their fragmentary knowledge of facts with a minimum amount of mental friction. On this point permit me to quote the very valuable report on physics-teaching made to the American Association for the Advancement of Science, by a committee of its section in physics, which seems not to have received the attention which it merited: —

"It is well known that many teachers of physics, and many more who are not teachers of physics, insist on the introduction of laboratory practice from the beginning, some even going so far as to claim that the use of the text-book may be entirely dispensed with. Without desiring to enter into a discussion of this question, we wish to express and with emphasis, our belief that laboratory practice is in general of little real use to the student unless he comes to it fairly well grounded in the fundamental principles of the science. The somewhat widespread opinion and practice, to the contrary, will be found, it is thought, to be one of those mistakes in which pedagogics seems to be caught on the rebound from other and generally more serious errors."

This report, from which I shall again have occasion to quote, is signed by

Dr. T. C. Mendenhall, Superintendent of the Coast Survey;
Professor W. A. Anthony, late of Cornell University;
Professor H. C. Carhart, of Michigan University;
Professor F. H. Smith, of the University of Virginia.

Rumor has it that, just after Mr. Edison had improved his phonograph, he was asked how he happened to strike the mixture which he uses for the cylinders. "Well," he replied, "first we tried beeswax, then we tried paraffine wax, and then about a dozen other kinds. None of them would answer, so I took 'em all and melted them up together, and it was just the thing."

We find ourselves at present in just Mr. Edison's predicament; of the methods discussed neither is satisfactory. Mr. Edison arrived at a desired result by extremely unscientific means, but his result was good, and the solution of our problem I believe lies in making a mixture of the methods. Let us use the lecture where it is found serviceable, the didactic method supplemented by laboratory work being our main dependence. It has already been said that the laboratory method pure and simple is a failure. I wish now to go a step further, and call attention to the wide difference which exists between the different classes of experiments.

There is a large class of experiments, each one of which yields almost as valuable results, when performed on the lecture table by an experienced person, as when performed by the pupils themselves, and there are very few, if any, of these experiments that cannot be so arranged that each person in an audience can see what it is desired to show as well as if he himself were doing the work. The pupils have the benefit of the instructor's guidance, and their attention is skilfully directed to the important points. In this class I would include nearly all of the illustrative experiments.

On the other hand, there is a class which yields very much better results when performed by the pupil, compelling clear thinking, and requiring careful manipulation. In this class I would include all of the quantitative experiments, problems requiring the pupil to make measurements of some kind.

The object of the illustrative experiment is the acquiring of a fact. The object of the quantitative experiment is the disciplining of the mind of the pupil, incidentally acquiring a fact just as in the illustrative experiment. If there was only a limited number of quantitative experiments suitable for high school work, or if the subject of physics might be extended over an unlimited time, it might be desirable to include illustrative experiments in our course, but with limited time at our command, it is the only reasonable way to confine our laboratory work to that class of experiments which will be of the greatest value to the pupil.

On this subject hear the report above referred to: —

> "The publication in the English language within a few years, of several excellent text-books of physics and a few laboratory guides of a high order of merit, together with a considerable advance in real scholarship among teachers, makes it possible to use the phrases "text-book work," "lecture work" and "laboratory practice" with a fair chance of being understood; yet it may be well to remark that where the latter is referred to, something very different from mere illustrative experimentation is meant, it being the opinion of the committee that the work in the laboratory should be quantitative rather than qualitative and always of as high a degree of precision as is possible with the appliances available."
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> "Of the character of this laboratory practice it may be well to say that no attempt should be made to carry the pupil through a very great range of subjects. The end sought for can best be reached by a careful and more exhaustive study of a few problems which should be solved with the highest degree of accuracy attainable under the circumstances."

The above remarks refer to high school work.

Mr. Gage, author of the well-known physics which deals almost exclusively with illustrative experiments, says in the preface to his "Introduction to Physical Science" that, during recent years, his preference has been gradually shifting from illustrative to quantitative experiments.

It is well known that at Harvard this distinction is recognized, the experiments which the students preparing for this institution are required to perform being almost without exception quantitative.

The highly successful work in the Physical laboratory at Clifton, England, is also quantitative, and the experiments are performed by boys from fourteen to seventeen years of age. Without stopping to mention other authorities on this point, lest I prolong my remarks beyond the time allowed me, I conclude for the above reasons that —

1st. A sufficient amount of text-book work should be done, to give the pupil a foundation in each of the grand divisions of the science.

2nd. This text-book work should be illustrated by experiments performed by the teacher.

3rd. All the time that can be allotted to laboratory work should be expended upon quantitative experiments.

In the selection of topics we must bear in mind the fact that most of our pupils end their education in the high school, and therefore it is desirable, as a matter of culture, that the course include a general treatment of the whole subject, selecting the most valuable topics, and omitting the descriptions of obsolete appatatus found in most text-books.

It is the duty of every teacher to shape his methods of instruction, and to make his selection of topics, as he believes is best for his pupils. For the past two years I have followed in my classes the plan indicated, with satisfactory results.

Our laboratary is provided with tables free from iron, having a strip nailed on each edge to prevent loss of mercury. We have room for about twenty-five pupils, (or if they work in pairs, for about fifty,) and during the last term we have been overcrowded, the class being divided into three sections.

Classes of this size cannot be handled successfully by one person, unless the problems are very simple. I tried it one day, and when I had gathered my distracted wits together sufficiently, went to the Principal to report. He suggested that we try the plan adopted with large classes in the chemical laboratory. Assistant teachers were selected from the class, who came to the laboratory the afternoon before the class exercises, at which time each performed one experiment, and was posted on all complications likely to arise. At the class exercise one of these assistants was in charge of each experiment, and of all the pupils performing it. The plan worked like magic. The pupil teachers were proud of their work and performed it very satisfactorily, lifting a great load from my shoulders. I have no desire, however, to attempt a larger class than twenty-five, even with this assistance.

We have tried two plans for the division of time. In the first one day each week was devoted to laboratory work, the subjects of the experiments being those discussed in the class room since the last laboratory period. According to the second plan, which I think I prefer, we complete a subject, e. g., sound, in the class room, and then stopping all class work, set apart as many days as can be spared for this subject to be used in the laboratory, each pupil working one and a half hours each day. This method requires less duplication of apparatus than the other. With very few exceptions, a half dozen instruments of each kind will answer for divisions of twenty-five working at one time. When performing experiments in heat, more thermometers than this number will be needed, since nearly every experiment requires one, but this is not the rule. Experiments are assigned a week ahead, and prior to the exercise each experiment is discussed, the theory explained, sources of error considered, and special directions given. The laboratory tables are "set" for the experiments to be performed; i. e., all the apparatus required for a given experiment is placed on a given table, and is known to be ready for work, in this way the pupils' time is economized, and it rarely happens that the double period, i. e., one and a half hours, is too short.

I have as yet no fault to find with pupils working in pairs. We have permitted it to a certain extent, and have *not* observed a disposition on the part of one pupil to allow the other to do all the work.

The notes are inspected, as the experiment proceeds, and the pupils are questioned on the theory of the experiment, and the accuracy of his results, until the teacher is satisfied that he understands what he is doing, and has mastered the problem he has attempted.

THE HOLIDAY CONFERENCE OF 1890.

SINCE the first organization of the Associated Academic Principals of the State of New York, THE ACADEMY has published in the February number following a full report of each Holiday Conference. We do not publish one this year. Two reasons influence us to make this change. First, the Regents' office has undertaken to give a full report of the meeting so that our subscribers in the Empire State will suffer no lack, and secondly, the discussions at the last Conference were not only mainly interesting to New York teachers, but also largely of such a nature as to be of little interest to outsiders. More than seventy per cent of our readers live in other states, and we assure them that they would not understand the discussions if we were to print them. Through the kindness of friends at the Regents' office we have been able to read the full report.

We give below a brief summary including the resolutions adopted at the close of the meeting.

On Tuesday morning, December 30, after the usual routine business was disposed of, the Conference decided to discuss composition work, just to occupy the time till enough principals should arrive to make it interesting and profitable to proceeed to the consideration of the Regents' certificates. Views were freely expressed, gradually tending to the idea that the most practical form of work is that which brings about daily writing on the part of pupils.

Later the value of Regents' credentials was considered, especially the recommendation that these be accepted by the normal schools, and by the State Superintendent in the uniform examinations for second and third grade certificates. The discussion was animated, and many good points were made, the whole question being finally referred to the committee on resolutions.

Invitations were presented from the American Institute to attend its meeting at Bethlehem, N. H., next summer, and from the National Educational Association to go to Toronto. The claims of the new *Educational Review* were presented, and copies of the first number were distributed. The afternoon meeting discussed the proposed changes in the Regents' examinations as indicated by the December edition of the "Proof under Revision." The question was mainly as to the number of examinations to be held each year, the exact time when it would be best to hold them, and whether or not papers should be submitted in all subjects at each examination. Naturally the questions divided the principals into two-term men and three-term men. There was infinite disagreement on all points, and the discussion was exceedingly entertaining to the initiated.

In the evening it was voted to appoint a committee to represent the principals in Superintendent Draper's proposed educational congress, and then the meeting took up the subject of a new basis for the distribution of the Academic Fund. The discussion led nowhere, of course, and the whole subject was finally laid upon the table.

Secretary Dewey once more made a faithful effort to find out what the principals wanted, with what success we cannot say. His questions and their answers will be found in the official report.

At the meeting of Wednesday morning, after a resolution endorsing THE ACADEMY had been unanimously carried, the "Proof under Revision," again came up for discussion, this time with reference to the work required for the various certificates and diplomas. Later a paper on teaching physics, which we print in full elsewhere, was read by Mr. Arey of the Rochester Free Academy. It was briefly discussed and highly commended. During the same session, after some opposition, it was voted that in the opinion of the principals the papers of the uniform examinations should be read and passed upon at the office of the Department.

At the Wednesday afternoon meeting, the endless subject of the Regents' examinations reappeared, and vote after vote was taken on question after question. Every conceivable phase of every conceivable view was presented, and in the end we doubt if anything came out clear, except the fact that everything was very much mixed. The usual votes of thanks were passed, and the conference adjourned late Wednesday afternoon.

The officers of the Association for the coming year are as follows: —

President, F. J. Cheney, of Albany.
Vice-president, C. W. Richards, of Oswego.
Secretary and Treasurer, F. L. Gamage, of Oxford.
Executive Committee, Henry P. Emerson, of Buffalo,
William K. Wickes, of Syracuse,
Charles H. Verrill, of Franklin.

The Association placed on record the following resolutions, which were formally reported by the committee on resolutions, discussed one by one, and finally adopted:

Resolved, that, in the opinion of the Associated Academic Principals of the state of New York, the subject of English composition is deserving of more attention in the schools of the State, and that we heartily approve of its introducduction into the lists of regents' subjects.

Resolved, that we request the Superintendent of Public Instruction to accept the regents' credentials and pass cards at their face value for work done in the normal schools in subject matter, making the advanced examinations in arithmetic and grammar the standard in these subjects.

Resolved, that we request the regents of the University to grant to those schools under their charge which desire them, three full examinations a year, to be held in November, March and June; and to those which desire them two examinations a year to be held in January and June.

Resolved, that we greatly appreciate the valuable services which Dr. Bacon has rendered the cause of secondary education by the publication of that excellent educational journal, THE ACADEMY; that we shall be proud to have it continue the organ of this body, and that we do hereby pledge it our hearty support.

Resolved, that this conference appoint a committee of three academic principals to confer with committees appointed by other educationol bodies of this state, in regard to the educational congress lately suggested by Superintendent Draper.

Resolved, that a standing committee of five from the Associated Academic Principals be appointed, who shall be ready to confer with the State Superintendent relative to the interests of training classes in high schools and academies from time to time as he and they may wish.

Resolved, that we the principals of academic schools in association at Syracuse, December 31, recommend that the regents of the University of the State of New York, the State Department of Public Instruction, the normal school principals, and the conference of the colleges of the Middle States and Maryland, be, and hereby are, requested to confer upon the "special topics" in English, to the intent that they may be the same.

Second, that the question of rotation or fixity of the subjects be referred to the same persons.

Third, that the secretary of the conference notify the proper officers of these various bodies of their action.

Resolved, that whereas there is a great lack of uniformity in marking the papers of the uniform examinations of the Department of Public Instruction by the school commissioners of the state, we, the associated principals of the state of New York, do therefore deem it eminently desirable that the papers of the uniform examinations be read and passed upon at the office of the department.

A RECENT CRITICISM ON HIGH SCHOOLS.

The following article, apparently editorial, we quote from the *School Journal* for Jan. 31.

THE HIGH SCHOOL AND ITS WORK.

The question of keeping the boys in our high schools is getting to be a serious one. In some cities and towns the attendance has steadily decreased each year, until now it is almost wholly made up of girls; and they are beginning to show a lack of interest. The question is beginning to be asked, "Is the work of the high school suited to the requirements of the pupils?" It certainly has disciplinary value; it also affords excellent opportunity for such as are seeking to enter college; but that number is small. The question of time and the need of preparation for life work is before a majority of the students. Most pupils completing the work of the grammar grade cannot afford to spend three more years in school, unless they know they will be better prepared to earn a living. Chemistry is an interesting and valuable science, but it is difficult to make a young man whose ambition is to be a salesman see its practical use. Book-keeping would appeal to his sense of fitness with more force. Geology, zoology, geometry, trigonometry, etc., have their uses,but they are beyond the necessities of the thousands who must begin life as clerks, accountants, stenographers, typewriters, and office assistants generally. The case is forcibly illustrated by what took place between a merchant and a high school graduate, who replied to the former's advertisement for an office boy:

Merchant.—"I suppose, young man, that your education fits you for this position?"

Young Man.—"Yes, sir! I am a graduate of———high school."

M.—"Here is a long column of figures. Will you perform the addition in two minutes?"

Y. M.—"I know how to add, but I fear I could not do it correctly in so short a time. I really have had no practice in addition since I left the primary school."

M.—"You may take these papers, a note, draft, check, receipt, lease, mortgage, deed, and name each one as you return it to me."

Y. M.—"Really, sir, I never saw such documents before."

M.—"Will you compute the interest on this note? You will notice it has several payments endorsed on the back of it."

Y. M.—"I fear I could not do that. It has been so long since I studied arithmetic. You know we did not have that in the high school."

M.—"Well, young man, what do you know?"

Y. M.—"I studied algebra, geometry, astronomy, zoology, botany, chemistry, French and German during my last year."

M.—"Then you had better apply to my friend Dr. Jones, the chemist. Your knowledge of chemistry would be valuable in his office."

Y. M.—"But, sir, I wish to enter the business world."

M.—"If you understand French and German I could induce Messrs. Import and Export to employ you as foreign correspondent."

Y. M.—"Oh! but I cannot write these languages. Our work was mostly translations."

M.—"I fear, then, you have no opening in the commercial world. You would be of no use to me. Good day."

This age demands training that can be used as a stepping stone to success. We do not advocate the abolition of "regular" courses, but we believe courses in practical matters would make the school far more popular. Does not the marvelous success of the commercial schools throughout the country show that the young men want instruction in what will aid them to earn a living. The high school that teaches book-keeping, stenography, letter writing, typewriting, banking, common law, practical writing, commercial calculations, short cuts in figures, uses of business papers and gives general drills that tend to quicken the intellect and secure accuracy at the same time, does not lack for pupils.

From nearly every sentence of the above we wish to record our emphatic dissent. During the past two years we have visited high schools in every state east of the Rocky mountains except Florida. If the question of keeping the boys in our high schools were so serious a one it seems strange that we should not have heard more of it. Throughout the country the attendance in high schools has been for years, and still is, steadily increasing. It would be interesting to know the names of some of these cities and towns where "the attendance has steadily decreased each year until now it is almost wholly made up of girls; and they are beginning to show a lack of interest." Everywhere there are of course more girls than boys, but this is to be explained on other grounds than those suggested by our contemporary. In some parts of the country the demand for girls is so small and for boys so great in industrial pursuits that the effect on their relative numbers in school is apparent. But there is no reason to attribute this to the nature of the work in the high school. The very eagerness with which high school boys are sought by business men is testimony to the value of their training. The conversation above quoted reminds us of one once reported to us by a wealthy manufacturer, a bitter opponent of high schools on the ground that they wasted the people's money, who assured us that graduates from our own school were worth nothing, that they could not earn their living, and were constantly applying to him for positions. But we could never learn the name of one of his applicants although we begged him at least to tell us when the next one applied. For many years we had kept a record of every boy that graduated, knew what he was doing and when, if ever, he had been seeking employment. We were therefore forced to the conclusion that the complainant was bearing false witness in his eagerness to attack the high school, or that he had been imposed upon by boys who thought their chances would be better if they claimed to be high school graduates.

It is sometimes well not to believe all one hears. A bank cashier once called us up through the telephone. "Do you know so-and-so?" "No, never heard of him." "Well, he says he is a graduate of the high school." "Just ask him to bring you a recommendation from me, and see what excuse he will give. There has been no pupil of that name in school during the past ten years." The boy did not press his application; he had simply traded on what he knew to be of value, namely the reputation of having graduated at the high school.

In the particular conversation reported by the *School Journal* there are certain mysteries to which our experience — not a limited one — gives us no clue. In the first place, boys of the age of high school graduates do not seek positions as office boys; they are too old, and the pay is not good enough. They can do better. In the second place, office boys are not usually employed to add columns of figures; merchants often have a book-keeper to do that sort of work. In the third place, it is not usually expected of the office boy that he will classify and arrange the important papers of the house. In the fourth place, ordinarily some one higher in rank than the office boy looks after the computation of interest on notes with several endorsements. It seems to us that a merchant who could ask such a series of questions of a prospective office boy would himself be a proper candidate for elementary high school instruction though he would hardly be likely to pass the entrance examination. To such a merchant nothing less than a prodigy would be suitable.

We agree with the *School Journal* that "This age demands training that can be used as a stepping-stone to success." In that respect it closely resembles every other age. Neither history nor common sense offer any indication that there ever was an age that did not "demand training that can be used as a stepping stone to success." It was as highly prized by the Spartan warriors two thousand years ago as by the the Apache Indians or the New York merchants of the present day. Standards of success may change, but success according to its ideal is the thing desired in every age, and all ages are alike imperious in demanding the training that shall lead to it. The formal announcement of such truisms throws little light on any of the problems of life or of education. But when one points to "the marvelous success of the commercial schools" he shows a conception of success which we hardly care to endorse. Are these really the highways to success in business? Does book-keeping open at once a career to the young man? An acquaintance of ours in Brooklyn advertised for an experienced book-keeper, salary ten dollars a week, and received more than five hundred applications. Are stenography, letter writing, typewriting, open avenues to fortune? Let any one offer the merest pittance for such work and note the swarms of seekers who will present themselves. The possessor of a trained mind which observes, forms correct judgments, and acts on them without external prompting, has before him a successful career in any one of a thousand directions. There is no overcrowded market of such as those; the supply never equals the demand. That our high schools train as many such boys as they should we do not claim; what we maintain is that by training such they will do far better than by trying to make book-keepers or type-writers.

This question of the practical is unnecessarily muddled because so few persons distinguish what constitutes the element of value in service. Not long ago we saw a girl 12 years old who made a phenomenal record on a type-writer — over one hundred words a minute if we remember rightly. What vistas of success must have opened before her if our *practical* friends are right! But she had no market value whatever except as an exhibitor. Typewriting did not make her valuable to a business man. She lacked the mental equipment which after all is the factor of real value. The real basis of the practical value of a man is deeper and broader than the slight accomplishments here mentioned. It rests upon character and mental training rather than on dexterity of fingers or readiness in figures.

COMMUNICATION.

To the Editor of the Academy:—

In your reference to my opinion about English schools in the editorial of the December number, you do me injustice and I must ask space for a reply. I did say to President Dwight that I had seen work done by boys of eighteen in English schools, which came nearer to the standard set in his article than I had expected to find. That opinion I still adhere to. In making this statement I have in mind chiefly two English schools, Clifton and Harrow, where I attended recitations. But both privately and publicly in my lecture on "The Public Schools of England" I have taken pains to say that I do not make this statement generally about the English schools; first, for the simple reason that I have not inspected carefully the work of any other schools, and secondly, because, as they are largely independent of state control or inspection, there is not only little uniformity but great diversity in the course of study and the attainments of the boys. Still I have a strong impression that the statement that the English boy at these schools accomplishes more than boys of the same age at similar schools in this country, is substantially true of a number of other schools. According to the "Public School Record" of the Pall Mall Budget for 1890, judged either by the number of scholarships won at Oxford and Cambridge, or by the number of certificates secured from the Oxford and Cambridge Examination Board, nearly a dozen other schools may fairly be classed with the two I have mentioned in scholarly attainment.

You endeavor to controvert this statement by quoting the requirements for admission to the different colleges at Oxford. But the gap in your logic is a wide one and lets your argument fall completely to the ground. You would have us infer that the course at the public schools is determined by these requirements, which is far from being the fact. The curriculum of many of these schools covers in Greek and Latin nearly as much ground as is covered by the preparatory course and the first two years of the average college course in this country combined.

Let me confirm this by quoting the official record of Clifton for the year 1889–1890. During that year the sixth form, or highest class, read in Latin, Cicero pro Milone, Aeneid XII., Book I. of Cicero de Oratore, and Book VI. of Lucretius, and Virgil Georgics IV. In Greek they read Thucydides Book VII., the Oedipus Tyrannus of Sophocles, Plato's Republic Books VII. and VI., Clouds of Aristophanes. There was also required work in Scripture knowledge, Latin and Greek composition and repetition, and mathematics, with a required choice between science, German or French. Such was the work of the last year.

A brief survey of the curriculum of the Senior School will strengthen my position. It is sub-divided into four forms, some of which are likewise sub-divided. All the forms have lessons in Scripture, Latin, English, history and mathematics. From September to Easter every boy must join gymnasium, workshop, cadet corps, chemical or physical laboratory or drill. In the third forms besides every boy must learn French, drawing and the elements of natural science. In the fourth forms he continues with these, but may elect between Greek and the alternative studies of German or laboratory work. When they enter the fifth form they are divided into the modern and classical side. In these upper forms the required studies are lessened and the opportunities for specialization increase.

It is important to remember also that in Clifton, as well as in the other great schools of England, because of the so-called superannuation rule, no boy can ordinarily remain in the school unless he reaches the sixth form by the time he is eighteen, and cannot remain in school after he reaches nineteen, except in special cases. This fact leads me to question a little your statement that "the average age at entrance in Oxford is considerably greater than that at Yale." The average age at entrance of the present freshman class at Yale is, I believe, eighteen years and ten months, while that at Harvard is reported as over nineteen. I have never seen any figures from Oxford on this point, but I do know that most of the boys go from their schools to the universities when they are between eighteen and nineteen. The official statistics of Rugby, which are now before me, give the average age of the sixth form for the summer term of 1888 as eighteen years and four months. Unless official figures, therefore, can be quoted in support of it, I shall have to consider your statement as hardly correct.

Now it may be said by some captious critic that courses of study are one thing on paper and another thing in reality, that too often they are likely to resemble somewhat Bob Sawyer's chest of drawers in his surgery, "Dummies, my dear boy," he said to Mr. Winkle, "half the drawers have nothing in them and the other half don't open." Such a critic could probably not be convinced unless he should go to Clifton, as I did, and see the thorough work they do there.

I am ready to allow that in my opinion, and according to my knowledge, Clifton College, except in Greek and Latin, has no superior and few equals in England as a secondary school. If it, therefore, be urged that what is true of Clifton concerning the boys' attainments is not true of the other schools, I cannot indeed deny it from personal knowledge, but the results of the Oxford and Cambridge certificate examinations last summer seem to support my claim. These examinations are now taken by most of the great schools of England, save Charterhouse and Manchester, and may fairly be considered the most general public test which is applied to the work of the public school.

These examinations, which are under the control of the Oxford and Cambridge Examination Board, are based upon a system which groups the subjects of examination under four heads, viz: language, English, mathematics and science. The language group is subdivided into Greek, Latin, French and German; and the science into mechanics, physics, chemistry, botany, physical geography and elementary geology and biology. Every candidate to secure a certificate must pass in four subjects taken from at least three different groups, but he may offer three language subjects, provided he passes in one mathematical or one science subject. The examination in each language includes four different things. (1) composition, (2) translation into English from books not especially prepared, (3) grammar, (4) portions of authors to be especially prepared. In the case of the modern languages there is an additional requirement of writing from dictation. With regard to specified authors, one of which must be offered, the list in Latin for 1890 included particular books of Cicero, Horace, Livy, Tacitus, Lucretius, Virgil. In Greek the following authors were named: Aeschylus, Euripides, Homer, Sophocles, Plato and Thucydides. In French candidates had to select particular works either of Molière and Guizot, or Corneille and Mignet, or Ponsard and De Bonnechose. The list in German included Schiller, or Goethe and Hauff, or Gutzkow and

Freytag. I quote these requirements at some length, so as to show the character of the examination, and enable you to compare it with the ordinary entrance examination at a New England college.

But now it is interesting to know how the schools meet their test. In July 1890 twenty or more boys from the following schools secured certificates, viz: Winchester, Harrow, Eton, Marlborough, Clifton, St. Paul's and Rugby. Of these the highest number came from Winchester, forty-five, and the lowest from Rugby, twenty.

On such facts as these and on personal observation, I found my conviction that the English boy at the secondary school accomplishes more before he is nineteen than the American. If this be granted, it would be profitable to inquire what the reason is. But I have already far outrun the limit of space I set for myself, and will not attempt any discussion of the problem.

GEORGE L. FOX.

Hopkins Grammar School, New Haven, Conn.

WE certainly had no intention of doing Mr. Fox injustice. Our only allusion to him in the editorial of which he complains was as follows: "To strengthen his position he [President Dwight] quoted Mr. Fox of New Haven, who, he said, had recently returned from a visit to the English schools and who 'comes home to tell us that the American boy can, for the English boy does.' We have talked with Mr. Fox since his return, and, while we found him bubbling over with enthusiasm, we did not learn that he was impressed with the idea that the English boy does so very much." Mr. Fox now writes us, "I did say to President Dwight that I had seen work done by boys of eighteen in English schools, which came nearer to the standard set in his article than I had expected to find." "The bearing of this observation," to quote an eminent authority, "lies in the application of it." Between it and the impression left upon us by Mr. Fox, we are unable to see any incompatibility. We confess also our inability to find here any basis for President Dwight's remark that Mr. Fox "comes home to tell us that the American boy can, for the English boy does." So far it seems that the criticism is leveled at President Dwight rather than at THE ACADEMY.

As to the gap in our logic that lets our argument fall to the ground, we are of course anxious for information, but we look in vain to the letter before us. It says, "You endeavor to controvert this statement by quoting the requirements for admission to the different colleges at Oxford." What "statement" is this, please? Is it the one Mr. Fox originally made to President Dwight, or that "I have taken pains to say that I do not make this statement generally about the English schools," or that "nearly a dozen other schools may fairly be classed with the two I have mentioned in scholarly attainments," or that "the English boy at these schools accomplishes more than boys of the same age in this country"? Apparently it must be one of these "statements," but of course, none of them was known to us at the time of our former writing, and so we are hardly open to the charge of endeavoring to controvert them.

Mr. Fox adds: "You would have us infer that the course in the public schools is determined by those requirements." This is our correspondent's logic, not ours. We made no allusion to public schools. They form only a part, those which he visited only a very small part, of the secondary schools of England, and it did not seem to us worth while to allude to them, "because, as they are largely independent of state control or inspection, there is not only little uniformity but great diversity in the course of study and the attainments of the boys." We quoted the University admission requirements because we thought it would be conceded that in any community the admission standard of the universities, taken in connection with the age of entrance, is a pretty fair index of what the youth of the community are doing in the way of scholastic attainment. Of course some go far beyond the requirement, others fall below it. Even in England some boys fail to get into the universities, even in the public schools some pupils come under the superannuation rule and have to go elsewhere to complete their preparation for the University.

Mr. Fox questions our statement that "the average age of entrance at Oxford is considerably greater than at Yale," and cites the average age of the sixth form at Rugby. But apparently he has forgotten that the superannuation rule takes out of such schools the slower boys, and that the average age of the sixth form is not likely to be the average age of the entering Freshmen. We based our statement on observations made at repeated visits to Oxford and on the testimony of the authorities there. These all agreed that the average age for taking the degree of A. B. is twenty-two. "The average age of graduation at Yale is now almost precisely what it was forty-two years ago, i. e., 22.4 years, and seldom varies a fortnight." The term of residence at Yale being four years and at Oxford three, it is easy to see that the age at entering Oxford must be greater. Anyone who is thoroughly familiar with University life in Old and in New England will, we think, hardly question the correctness of our statement.

As indications of the average work done in a school we are inclined to attach less value to the examinations cited than does our correspondent. Without seeing the questions and knowing the method of marking and estimating the results, one could not tell much about the attainments even of the successful candidates. Still less could one judge of what was done by those who do not enter the examination. Twenty or more boys from each of seven schools cited secured certificates. Admitting the examinations to be a fair test, this does not seem to us a remarkable showing when we remember that these seven schools have four or five thousand pupils in attendance; and when we remember also that these seven schools are supposed to be among the very best in England, we can hardly accept even this as indicating what the English boy does.

Our readers will not easily believe that we wish to lower the ideals of American teachers or to assure them that there is not much to be learned in England and elsewhere. The highest type of teacher abroad far excels our best in scholarly attainments, if not in pedagogic skill. But the highest type is not the average type in any country. We think there is far more difference between the highest and the average, both among teachers and among pupils, in England than in this country. We were told when at Eton, that with 960 boys in attendance they depended mainly on the seventy collegers to sustain the reputation of the school for scholarship, and we were repeatedly assured in many places that the function of the public schools was to make men, not scholars, — no unworthy ambition, we humbly think. We yield to no man in admiration for the splendid masters in some of the English schools, or in appreciation of the healthy moral tone among the boys in the best of them. But that they succeed in doing for the English boy in scholarship what President Dwight believes can be done for the American, we did not find out, although we have spent many weeks in diligent search. Nor have we ever met an English teacher who thought they did. That they do all this and more for their best boys one might admit. So do we in America. President Dwight himself might be cited as an example of what the American boy has done. Bancroft, graduating with honors at Harvard and taking his degree at Göttingen before he had reached the limit of age at which the English boy must leave the public school, is another. Gildersleeve and Everett, and many others come to one's mind, but there are few things wider of the truth than the common assumption that what one boy has done all boys can do. Possibly some time the American boy can do what the English boy so far has not done. We certainly hope that he may, and that the English boy will emulate him. — [ED.]

NOTES.

With the present number THE ACADEMY enters upon its sixth year. Not a few who read this paragraph will recall "Our First Word" written just five years ago. They will remember that we modestly set before us a not ambitious task. We proposed "to conduct a journal for those teaching youth in their 'teens, not forgetting the relation of that work with the earlier work, mindful also of the steps that may follow, but aiming chiefly by suggestion and mutual aid to raise the standard of secondary instruction and increase the efficiency of secondary schools." How far THE ACADEMY has succeeded in its undertaking, our readers can judge with less bias of prejudice than we. Kind words have come to us in abundance from those whose good opinion we value most highly, and they have been our best reward and encouragement.

We have followed somewhat closely the lines which we laid down, because by so doing we felt we could best accomplish what we sought. We have been and are still saying *quomodo*, not *quare*. We have left others to discuss the science of education. We are intent upon the art of teaching, of "keeping school." We have not felt that our readers were children to be amused, or automatons to be fitted with cunning devices, we have preferred rather to think of them as men and women, able and willing to read and reflect. If we have not made an entertaining journal, we have tried to make a helpful one. We have known from the outset that on these lines we never could have a large list of subscribers. But THE ACADEMY was not started to make money, and we have never mourned because no direct pecuniary gain has come in return for our work. We say "direct pecuniary gain," for indirectly it has brought to the editor opportunities which otherwise might not have come to him, and which have had a pecuniary as well as other value. But the securing of these opportunities has not furnished the motive for the conduct of the magazine. It has paid richly, too, in other ways, in troops of friends unknown before, in wider knowledge, in better hopes, and in the consciousness of having helped somewhat to better secondary teaching and to bring secondary teachers into closer acquaintance with one another.

To show what is doing in other lands, and what different teachers are doing in our own, to present suggestions from teachers in superior schools and universities, as well as from intelligent outsiders in the great world, has seemed to us part of our legitimate work. But we have not sought to have great names appear on our pages, and much of the best that we have printed, has come from writers unknown to us and to many of our readers. We have tried also to keep in touch with the various organized efforts to bring about a better relation between the secondary and higher schools. We have found great dearth of practical helpful literature on certain subjects and twice have tried to stimulate thought by offering prizes.

We have not sought our own private ends, and we have not knowingly been a party to pushing the private schemes of others. We have lost some support by refusing to do this, but we have not grieved over the loss. We have avoided personalities both from choice and from principle. We have sought to injure no man's fame or prospects, we have attacked no man's motives, and curried no man's favor. We have never criticized without definitely stating the grounds of our criticism, and in many cases have simply withheld approval where we might easily have condemned

We entered upon this work purposing to get, and hoping to give, help. Our purpose and our hope have not changed, and so, in all frankness, we repeat the closing words of our first editorial: "If you think we are doing a needed work, help us all you can. If not, let us alone and we will withdraw from the field."

We recently received a memorial pamphlet containing the addresses of Dr. Hall and Professor Root on Dr. Peters of Hamilton

College. Less than a week before his death we spent an evening with Dr. Peters. The talk drifted to the subject of astronomical discoveries, and for an hour the Doctor gave with minute exactness of detail, accounts of the work of Adams, Leverrier and others. One hardly knew which was greater, his modesty or his learning. Later the conversation came round to his work in Italy, and here it was very hard to induce him to talk at all.

That he was a mathematician and an astronomer, the world knows. He was also an entomologist and a botanist, and well read in many other sciences. But it was on the side of linguistic and literary attainments that his acquirements seemed almost appalling. Once, in his bachelor appartments at college, where he lived in Spartan simplicity, we picked up a Russian magazine with the question, "Doctor, do you read this?" "Yes, I read it, but I can't speak it very well." All the languages of western Europe he spoke with readiness. He was one of the few men we have known who read the Latin and Greek classics in the original for pleasure. He was familiar with Turkish, Arabic, Hebrew and Persian. And he did not read simply mathematical or astronomical periodicals in all these languages. He was surprisingly well read in the polite literature of many of them. His thick speech and careless enunciation prevented many who met him from divining the fineness of his literary sense. He seemed to speak English badly, but more than once we have submitted to him some nice point in literary criticism and never failed to receive an answer that showed his appreciation of language.

It was good for any man to have known Dr. Peters, especially good for generations of college students during thirty years, to see one who dwelt literally and figuratively among things above and beyond the ordinary range of mortal affairs. It was good for them in youth to see the modest humility of a man whose attainments will not suffer by comparison with any man whom they shall ever meet; to see one, lonely throughout a long life both by habit and by occupation, full of love and sympathy and helpfulness for others. It was good for them in these years of eager competition for better pay and higher emolument, and of bitter complainings of insufficient endowment and poor equipment, to see an uncomplaining enthusiast receiving a thousand dollars a year, and making his skill supplement the modest resources of his observatory. Men of such type are worth more to an institution than endowment or buildings or pecuniary resources. They are the best evidence of the falsity of the claim that if an institution can command money it can command everything else.

With the first day of January there appeared on our desk promptly, according to promise, the initial number of the *Educational Review*. Its editor is Nicholas Murray Butler, Ph. D., assisted by Drs. Cook, Maxwell and Poland. The publishers are Henry Holt and Company of New York.

Probably most of our readers have seen the new magazine, so that extended comment from us is not needed to impress upon them its merits. It certainly presents an unusual array of well known names, and these alone will secure for it a careful consideration. It is too early yet to determine what lines it will follow. Two articles, "Is there a Science of Education?" and "The Herbartian School of Pedagogics" are numbered I., so that apparently those subjects are to be continued. The "Discussions," short signed articles on educational topics of the times, do not impress us as adding special strength to the magazine. The editorials and book notices seem much stronger. We like especially what is said regarding degrees. It is timely and suggestive though we fear the disease is not confined to elementary teachers. From the title page of the *Review* one might suspect that editors would catch it if exposed without proper precautions.

In "The Provincialism of New England Teachers," the editor waxes rather caustic over "the professional isolation of the New England school masters." It is much in the nature of news to learn that Presidents Eliot, Hall and Capen, do not know what is going on educationally in other parts of the country. We could easily believe it of some of the New England school masters, but not of these men or of Mr. Tetlow. Another and more likely explanation suggests itself to us, and that is that these men know very well "what progress has been made in other parts of the country toward a solution of the problem," and consequently feel the necessity of trying something different. This explanation seems the more probable from the following fact which recently came to our notice:—A New York man whom we have looked upon for years as a specially good judge in such matters was asked last month by a young college graduate if he would advise her to spend a year in one of the professional schools of the state, and promptly answered no. *He* certainly was not ignorant of the existence of the schools mentioned in the *Review*.

We have looked hopefully for the appearance of this new departure in educational journalism. There is among teachers, we believe, a need of periodicals of high character and broad scope, and we wish the new venture abundant success. The publishers have had wide experience, the editors are men of affairs accustomed to succeed, the country is large and the times are fortunate. We shall look with interest for the succeeding numbers.

OUR readers are sure to be interested in the battle royal which took place at Oxford, December 23, when in the Conference of Headmasters, Mr. Welldon of Harrow proposed, and Dr. Fearon of Winchester seconded the proposal, that it be resolved,

"That in the opinion of this Conference it would be a gain to education if Greek were not a compulsory subject in the universities of Oxford and Cambridge."

The explosion in England of such a bombshell as that can easily be heard across the Atlantic. The question was well discussed and the resolution was finally voted down, 31 to 29. To our thinking the special significance of the movement lies in the fact that the proposer and the seconder of the resolution are both distinguished classical scholars, fully conversant with all the advantages which can come from the study of Greek, and not wanting in reverence for "the shrine of the genius of the old world." They do not abandon the shrine, but they urge a willing rather than a reluctant homage.

The following is from the editorial comment of the London *Journal of Education* for January, which, by the way, gives a wonderfully good account of the whole conference:—

> "By the narrow majority of two, the headmasters have decided that it would not be a gain to education if Greek were not a compulsory subject in the two older Universities. Another such victory as that of the Grecians at Oxford would be fatal to the cause. If votes are weighed and not counted, there can be no doubt that Mr. Welldon has carried the day. Only one headmaster of the first rank threw his whole weight on the side of the opposition, though there were many trimmers like Mr. Bell. The two main arguments of the majority were mutually destructive. On the one hand, we were told that Greek is the queen of arts, and an Arts Degree without Greek language and literature would be the play of *Hamlet*

without the Prince. On the other hand, we were assured that the Greek required for Responsions or Little-Go was no hardship, but a pleasant relaxation to the modern-sider, and could be crammed by an intelligent boy in the course of a few weeks. But underlying all the arguments was the old clerical and exclusive sentiment (which only one or two had the courage to express) of Dean Gaisford:—'Gentlemen, a knowledge of Greek will enable you to consult the oracles of God in the original, and to look down from the heights of scholarship on the vulgar herd.'

"In the course of the debate Modern Sides came in for hard knocks. They were the sad necessity of a utilitarian age, of an inferior intellectual (if not social) calibre, beaten on their own ground by classical boys, fit recruiting grounds for the counter or the camp, but not to be admitted to the mystery of the University. Any modern-side masters who were present in the audience must have felt that their classical superiors were adding insult to injury. First they skimmed the cream, and then boasted that their cheese was superior to what their assistants make of the buttermilk left them. Handicapped as they are by dependence on headmasters whose leanings and traditions are mostly classical, by lack of prizes and scholarships, and by the barrier of Greek to a University career, Modern Sides continue to wax and thrive, and few, even among headmasters, would now endorse Mr. James's opinion that they are the intellectual helotry of our public schools. The parental formula, according to Mr. Wickham, 'Teach my son anything you like, only not Greek,' seems to us a reflection, not on the philistinism of parents, but on the pedantry of headmasters."

But the battle at Oxford was a mere skirmish compared with the deadly strife which has raged all over England since that meeting. Sitting quietly out of range three thousand miles away, we can watch with calmness the desperate struggle. The London *Times* in its columns of correspondence presents a spectacle picturesque and amusing to those who have no friends exposed to deadly peril, or who are philosophical enough to feel that if their friends are to be killed it is probably the best thing for them. The combatants are of all ages and of all ranks in life, in various stages of vigor and decrepitude, and they have armed themselves with whatever weapons their knowledge or their ignorance prompted them to select. There is the medieval blunderbuss, irresistible in its recoil, warranted to hit every one, friend or foe, within its range. There are the condemned fire-arms of a former generation, sure to explode and cripple those who hold them, harmless to the foes in front, but full of peril to those who invoke their protection. There is the match-lock that glows and fizzles but does not go off, and the flint lock that always misses fire at the critical moment. The modern men seem to have, as might be expected, better weapons, and their powder makes less smoke. Hence their aim is better than that of the ancients, who cannot see their opponents' position and so are firing somewhat at random. The latter suffer more, perhaps, from the recoil of their weapons than from the aim of the enemy. Both agencies may be equally fatal, but there is less of pain in the high velocity of an enemy's bullet than in the awkard "kick" of one's own weapon. When the battle is over and the smoke clears away, we shall expect to see a field covered with corpses "with wounds all in front and fierce countenances even in death," to remind us of the fatal victory another Greek force once won on another field. For we take it for granted that the Greeks will win the present fight. Another such victory, said Pyrrhus, and we shall go back to Greece without an army. The parallel will hold throughout. The ancients have won one battle, they are likely to win again. But victory does not always mean triumph. There is a vigor and vitality about the moderns, a calmness under defeat and a power of recuperation which augur ill for those who contemplate their final suppression. Professor Freeman writes that he cannot "calmly argue the question." There Mr. Welldon and the others have decidedly the advantage of him, for they can argue the question very calmly and very effectively, too. To our thinking the question can just as properly be settled by argument as by assertion, and really we do not see what advance is made even if we were to grant the truth of his statement, "I can no more fancy what I should be without Greek than without eyes."

The principals of the New York secondary schools will compare well, in our opinion, with those of any state in the Union in practical knowledge of the art of teaching, in *esprit de corps*, in good temper, in general ability to get on in the world, in modesty, and in independence. They are far more open to new ideas than is the average pedagogue. We know them so well and esteem them so highly that we are reluctant to pass a criticism. We cannot help feeling, however, that the Conference of last year and, to even a greater degree, that of this year fell short of the highest ideals. We wonder if the principals went home feeling the inspiration that ought to have come from so large a gathering of good men, bent on a single purpose. It has seemed to us that the earlier meetings, though smaller, were more improving, that they kept closer to broader and more useful questions. This year the Regents' examinations dominated the whole Conference, and not only that, but it was the bare machinery of the examinations that stood forth at every meeting, aggravating and repellant. The questions were bound to come up, they demanded discussion, and they are still unsettled. We hope that the settlement which will probably come from the Regents' office during the present year will be accepted as the final and best available solution, and that future Conferences will have more inspiring and fruitful themes than, How many examinations shall we have each year, and when shall we hold them.

To our notice, in the December *Academy*, of the Latin journal *Alaudae* we are now able to add more exact information from copies that have come to hand. In form and size the paper is as modest as its name. It consists of eight pages, on which the column of print measures 3¼ x 5 inches. Apparently it appears monthly, omitting, however, the months of August and September. We reproduce the heading of the number for October, 1890. Our readers will see that the price of subscription is within reach of even the pedagogic purse.

ALAVDAE.

Aquilae mense Octobre.

Linguae Latinae mira quaedam vis inest ad jungendas nationes.

Lex pacti: sex libelli fr. 1.50; vel Lipsiae apud F. A. Brockhaus vel Aquilae apud *administrationem Alaudarum.* (Hoc nudo uti velis titulo.) Fr. 1.25 paciscentibus Aquilae Jtalis. Libelli 1—12, fr. 2.50. Lib. 1—6, fr. 1.15.

The following extract from a letter written to the editor of *Alaudae* from Cairo, Egypt, will not be without interest.

"In Oriente rara avis Latinitas. * * * At inter catholicos Armenios inveni sacerdotes cum cultissimos, tum linguam Latinam probe edoctos. Hic, Cairi, his Armeniis sedes episcopalis est. Cujus antistes, episcopus Parnapas, nuper me praesente Latine collocutus est cum episcopo Americano. Longe vero superiorem se praebuit Armenius. Cujus sermo Latinus fluebat velut rivuli liquida unda. Vix respondere ei valuit alter. Non sine labore saltem, pluries haerens, et cunctante lingua respondit Latine."

In the numbers that have come to us we find abundant evidence that *Alaudae* is not unknown in these states. E. g., the editor writes:—"Venit mihi invitatio, unde minime somniaveram: ex oppido Americae *Jaxonis Villa*, civitatis Jllinusae, ut assisterem solemnibus ibi celebrandis in aula academica d. 7 Nov. 1890 in honorem natalis, natalis cujus? *Platonis.* Rei impulsores et fautores 4 personae, vir doctus et 3 feminae doctae, 2 matronae et una domnula. Etiam sermonum unus dicetur a femina."

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND
ACADEMIC DEPARTMENTS

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THE EDUCATIONAL SYSTEM IN PUBLIC SCHOOLS.

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II.

One who criticises the existing educational system in public schools, however mild or sympathetic may be his criticism, is probably bound to indicate, at least in outline, the kind of system which would approve itself to his judgment. Such a reconstruction is indeed the better part of criticism; but it is the harder, and he will undertake it with misgiving. Nor can it be made, perhaps, wholly interesting or intelligible, except to educational specialists.

In the large majority of schools which have admitted the possibility of organising a systematic education, apart from the old classical lines, the institution of what is called a modern side has been regarded as a practical satisfaction of the new intellectual demands. It may be true that the conception of a modern side has not been sufficiently analyzed. It was the habit of the ancient Greek world to recognize only two classes of people — viz., those who were so fortunate as to speak the Greek language, and the rest, called "barbarians," who were not. Similarly in public schools (if the comparison may be used without offence) there have been generally recognized on the one hand the classicists who were capable of learning Greek, and on the other the "barbarians" of the modern side. Hence if a boy showed a distaste or incapacity for acquiring the classical languages, the easy remedy was to transfer him to the modern side. But in such a case it was apt to be forgotten that these boys were widely different in temper and intellect, that they deserved an equal consideration with other boys, and that if they had all done more or less badly in one line of study, they would not necessarily all do better in another.

A modern side, rightly considered, is not a hospital for all the failures of a classical education. Nor is it a part of the school in which language and literature, as educational instruments, are simply sacrificed to other subjects, such as mathematics and natural science. It holds a place beside the classical system, but not below it; it is its equal in reality and value; it is equally defensible on educational principles; and equally cogent in the interest of its studies. Practical men who have seen a modern education tried under such conditions as are difficult, if not impossible, will perhaps be tempted to speak of it as inefficient; but I can answer for the possibility of so ordering the conditions that the education may be largely successful. A modern side then may be generally described as a part of the school in which modern languages, including English, hold much the same place as the classical languages have long held in the school generally. For while the educational value of language remains indisputable, being derived from its origin, character, and creations, and above all from its relation to human thought, it does not seem to follow that this value belongs exclusively to one language or one family of languages rather than to another. Apart from the incidental differences, to which I referred in a former paper, it may be said broadly that whatever intellectual discipline is derivable from the languages of Athens and Rome is derivable also from the languages of Paris and Berlin. It is difficult to conceive that a satisfactory education in public schools could be organized except upon a basis which is in a great measure linguistic and literary. But the difference between ancient and modern languages, as educational instruments, is one of degree; the difference between language and other subjects is one of kind. Still, while the possibility and the utility of a modern education are frankly recognized as inductions from experience, it may be doubted if the mere division of a school into a classical and a modern side will ultimately prove the only or the best means of adapting the scholastic system to educational needs and opportunities. At all events it lies open to some objections. It tends to destroy the visible unity of a school, by breaking it up into two parts of unequal magnitude and with different relations to its head. It is apt to impair the sense of equality which ought to exist among all the recognized lines of study and culture. It affords an insufficient guarantee for that common property in the subjects of learning which, as I tried to show in my former paper, is indispensable to a sound educational system. But its principal defect is that it does not meet and satisfy the large variety of intellectual demands, it allows an education which is bipartite, but only bipartite, and cannot be amplified, except by the process of specialization, which, if it be uniformly employed, will do away with the necessity of dividing the school into two co-ordinate sides. It may be said in fact that the justification for a modern side lies in the present privileged position of Greek. It is because Greek is a protected subject (so to say) that it is still studied by a large majority of boys; hence it holds a primary place in the general system of schools, and such boys as do not learn it have been treated independently of the general system; in other words, they have become a modern side. But it may be anticipated that, when schools are organized scientifically, with reference to the present and probable future conditions of knowledge, the distinction between the classical and modern sides of a school will be merged in a more comprehensive educational organization which will take account of the multiplying needs and opportunities of the modern intellectual life. Then a public school will again possess the organic unity which has been lost since the first inroads were made upon the old exclusively classical education.

Before attempting to draw the outline of such a system, as it will necessarily comprise a large and various number of subjects, it will be well to examine, not indeed completely, but with such care as may appear sufficient for a practical purpose, the conditions or limitations with which some subjects can be properly taught in public schools. For it is impossible to teach everything to everybody; we must sometimes do not what we would but what we can.

Now it may be said that the multiplicity of subjects claiming a place in the educational system will necessarily affect modern education in three ways. It will lead to the postponement of certain subjects until a somewhat later age than has been usual. It will tend to restrict the range within which certain subjects are studied, except by the boys who may study them as specialists. And it will encourage a liberal elasticity in the studies offered to a boy from the time when his special aptitude or capacity has been determined. I see no possible means of organizing a complete educational system of the future except in this way.

1. The human mind, like the body, requires not only food but a variety of food for its proper nutriment. It is evident that the actual amount of the variety will depend to some extent upon the assimilative or digestive power of the mind itself. There is always a danger of teaching less by trying to teach more. But if a young mind is capable of acquiring a certain ascertainable amount of knowledge in a given time, and if that amount of knowledge is or may be increased by variety, then it will be the business of educational science so to modify and diversify the mental diet as to make the best use of the time at its command. To lay down this law is not to assert that a variety of educational subjects is always and everywhere a clear gain; still less that the greater variety will necessarily result in the more satisfactory products of teaching; but it is to assert that variety is one condition of an effective educational system. It is clear, too, that the simultaneity of two or more subjects may in some cases prove prejudicial to both or to all; they may be better studied successively than together. The proverbial difficulty of driving a number of coaches abreast through Temple Bar has its analogue in educational science. It is a mistake to teach too many subjects, especially too many cognate subjects, at the same time. And I think it is the case that among such subjects foreign languages are peculiarly likely to check and interfere with each other, to get in each other's way, as it were, by their concurrence, and to create confusion of thought where clearness is indispensable. For every language possesses its own laws and idioms, its characteristic qualities, in a word, its proper genius distinguishing it from all other languages. It may be true or not that bilingual nations are generally barren in literary productiveness. But any one who has attempted to learn two foreign languages simultaneously, or to learn a foreign language while habitually speaking his own, or even to teach two languages in alternate lessons for a certain time, instead of teaching each of them separately for half the time, will have felt the intrinsic difficulty of harmonizing different linguistic idioms, forms, and modes of expression. And if it is clear from these considerations that educational subjects should be varied without being multiplied, it is not less clear that the early educational years should

as far as possible be kept exempt from the studies which may afterwards be abandoned as useless. It has been one of the sad facts of education that it has so often given cause for inevitable regrets, that so many men, in looking back upon their school years, have lamented the enforced waste of their time. It is essential to the proper discipline of the early years that the teaching given in them should be such as will bear upon the ultimate intellectual purpose of a boy's life, whatever it may be. Variety and utility, then, are the principles of a sound preparatory education.

In my former paper it was argued that certain subjects — viz., Divinity, Latin, French, mathematics, natural science in some of its branches, and English literature, including history and geography — are entitled to hold what may be described as a primary place in education; they are the subjects which will be generally studied and will form the common property of educated men. It would seem to be a natural, if not a necessary, inference that these subjects, unless in themselves they are unsuitable, should occupy the early years of life. Those early years, considered relatively to my present argument, may be defined as the years from ten to fourteen, which are educationally, perhaps, the most important years of all. For, if educational subjects are partly necessary and partly optional, it is reasonable to hold that, as the option cannot be rightly made at first, boys in their early years should confine themselves to the studies which will serve them afterwards, however the option may be exercised; this is the only sure way of avoiding loss of time and power. But in the education proper to these years, as so decided, the study of language comes already into prominence; Latin and French, as well as English, are already recognized parts of the primary educational curriculum. There may be reason to think that within the limits of these years the study of French should not altogether, though it must to some extent, synchronize with the study of Latin; for French may be learnt somewhat earlier than Latin, and from nurses and governesses as well as from schoolmasters. But the simultaneous study of three or four different languages, Greek, Latin, French, and sometimes German, besides English, is calculated to weaken the intellectual grasp of all languages. Such a congeries of different languages in the early years of life is opposed to psychological law, it prevents the acquisition of indispensable knowledge, and it is responsible for a certain mental impoverishment. It is probable, that as educational science proceeds, two of these languages, and, naturally, those the languages not of primary value — viz., Greek and German, will be taken out of the early or preparatory years of life (unless in some exceptional instances), and the time so gained will be set free for the study of the other languages, and of the primary subjects in general. This is not a change which will be effected without resistance. There are educationists who see the gain of deferring the study of German, and yet who cling with a passionate conservatism to the early teaching of Greek. But it is a change which seems to follow, as a corollary, from the distinction between primary and secondary educational subjects. It is a legitimate question whether Greek should be regarded as a subject so important that it must be enforced at whatever cost upon the attention of all boys, though it is a question which has been practically settled by the necessary march of events. But there can be little doubt that, if it is not so regarded, it ought not to enter into the education of the early years; or, to put the case otherwise, that it is a mistake for boys to spend a year or two in acquiring the mere elements of Greek and then to abandon it for life.

The postponement of the study of Greek is probably the first step in a true and thorough educational reform. It is the only means of setting free the time demanded by the primary subjects in education. It has been here advocated on broad intelligible principles, without such reference to details, whether in its favor or against it, as lies outside the scope of a paper which aims at formulating a general educational scheme. But it is a pleasure no less than a duty to acknowledge that it was recommended by the headmaster of Winchester College in a remarkable paper which he read to the Conference of Headmasters in 1886. It will, perhaps, be thought strange that the headmasters at their conference should have "found" educational "salvation" (if I may venture to parody a current phrase) in a scheme of reform issuing from that ancient and renowned seat of classical learning. But the event, if it was unforeseen, is auspicious.

> "Via prima salutis,
> Quod minime reris, Graia pandetur ab urbe."

2. When the proper educational subjects are decided, whether universally or in regard to particular periods of life, it is natural to consider within what range or to what point each such subject may be reasonably studied. For there are two ways of studying a sub-

ject; it may be studied either practically or scientifically; and the practical way is widely different from the scientific. Thus a student may look upon a subject only as entering, like other subjects, into the general body of information which he wishes to possess in common with most cultivated people, or he may look upon it as a speciality to which he devotes himself. In the one case he will try to divest it of accretions or embellishments, except so far as they are essential to its efficiency; in the other he will spare no time or pains upon it. For it is one thing to know a subject sufficiently well for the practical purposes of life, but it is another thing to know it completely and scientifically. And, if this is so, it is clear that the primary educational subjects, although they naturally admit of specialization, yet, so far as they are merely parts of the common culture, will be studied in a limited sense. For educational subjects, as has been said, grow and multiply, but the years of education remain the same. It is apt to be forgotten how brief is the time with which a schoolmaster, and especially a public schoolmaster, has to deal. Perhaps it is ten years, certainly not more, that are given to education, and to the education in a public school not half of these. It is simply impossible that all educational subjects, numerous as they now are, should be taught with the same accuracy of detail as when they were few. As one looks back upon educational history, one cannot help feeling as if it had once been the schoolmaster's object to devise the means of occupying with ingenious exercises the hours of a school life which was too long for legitimate education. His ingenuity was remarkable, nor was it misspent. If it is proposed to reform the old educational system by mitigating some of its characteristics, the reason is not that the studies which will be given up were always valueless, but that other studies have now become more valuable. But it will be well to indicate by two or three instances the necessary limitations of general culture.

Versification in Greek and Latin is an art which has already suffered so much disparagement in theory, and is practically dying so fast in public schools, that there can be little scruple or danger in relegating it to a secondary educational position. The historian of education in England will probably some day look upon the remains of youthful poetical compositions in the dead languages with something of the same amused curiosity with which a schoolboy in his geological museum looks upon the skeleton of some extinct and unknown mammal. Yet in an age when educational instruments were few and imperfect, versification itself possessed a definite use. Nay, it must be admitted that the highest classical scholarship — the scholarship of a Kennedy, a Jebb, or a Butler — is still unattainable except by means of verse composition. The exquisite subtlety of taste which distinguishes English classical learning in its finest instances from the classical learning of other nations is, I think, bred upon Latin and Greek verses. But, while it is clear that this subtlety lies beyond the reach of ordinary boys and, if they could attain it, would not repay them the cost of attaining it, it seems proper to insist upon a point which is sometimes forgotten in the estimate of versification. Versification in the dead languages, as taught to schoolboys, comprises two parts — one artistic and the other merely mechanical. The mechanical part of it, including prosody, the extension of vocabulary, and the cultivation of a rhythmical sense, would seem to belong not only to classical education, but to education generally. But it is here that versification as a part of the common educational system ought to end. As soon as it becomes a matter of the critical faculty and demands the gift of poetic imagination, it ceases to possess an interest or value for the mass of boys, and it should be reserved for such boys as are capable of appreciating and imitating the graces of poetry. For most people, it needs to be said, in view of the many subjects — literary, historical, and scientific — which constitute the wide and ever widening body of knowledge, that the time devoted to writing Latin and Greek verses, if it is not wholly wasted, yet might have been more usefully spent.

But it is not only the classicists, it is also the modernists in education, who sometimes make too large a claim on the years of school life. Thus, it has been vigorously demanded that the public schools should teach conversational French and German to all boys. It has been put forward as a reproach to the public schools that boys, who have been educated in them for some years, are yet unable, when travelling upon the Continent, to enter into conversation with foreigners.

Now it may be admitted that there is no impossibility in teaching a language conversationally to boys. It may be admitted, too, that French and German are largely valuable as instruments of conversation, though that is not their only value. But the question is not so much whether it is possible to teach conversation in public schools as whether it is possible to teach it more economically and efficiently there than elsewhere. Upon the whole the conditions of public school life must be said to be unfavorable to colloquialism in a foreign language. Boys do not learn much by listening to a monologue of the French master; they learn still less by listening to the bad French of other boys. It is only in the highest forms or among boys who are specially interested in conversation — *e. g.*, candidates for the Army examinations, that a foreign language can be used as a vehicle of instruction or recommended chiefly as a colloquial exercise. For the majority of boys colloquial French or German at school, like Latin versification, must remain a luxury; it can be acquired by none but the specialists in modern languages; it requires too much time to be compatible with such other educational subjects as are proved to be indispensable, and boys learn it better by spending six months in France or Germany than by working at it for as many years in a public school. But while it seems probable that public schoolmasters would mistake the nature of their true opportunity if they should compel a large number of boys to practise conversation in a foreign language, it is their simple duty to see that all boys acquire a knowledge of the vocabulary, grammar, and (though in less degree) the literature of at least one foreign language. This is the knowledge which can be best imparted in a public school, it is seldom possessed by the boys who are familiar with a foreign language conversationally, and it is the only sure guarantee for rapid progress in the conversational use of it at a later time. It may be said then that the proper function of a public school, in respect of foreign languages, is not so much to teach them conversationally as to bring boys to a point at which they can learn them conversationally by living abroad for a few months or a few weeks.

Again, the present age has outlived the sanguine hopes once expressed for the regenerating influence of scientific study upon the education of boyhood. He must be superior to reason or experience, who still believes that natural science will transform learning from a pain to a pleasure in boys' eyes. Here and there, perhaps, a boy of special capacity will spend days of patient pleasure in a laboratory. But the majority of boys have cared for science as much or as little as for other subjects; they have certainly not cared for it more. No mistake could well be more serious than the enforcement of natural science, except within definite limitations of time and subject, upon the attention of boys. Natural science possesses no special charm for most boys. It happens too often that the boys who distinguish themselves in natural science are the same who distinguish themselves in other subjects; and the reason is not that they are good at science, but that they are good boys. It would seem proper to determine the position of natural science in the public schools by two considerations, which will be generally accepted. One of these is that all boys should in their school life pass through an elementary discipline in some branch or branches of scientific study; for so only can they gain the *minimum* of scientific knowledge which is prescribed as a necessary element in education. That is all the scientific teaching which is proper to most boys. But it will not be so with the few boys — for such undoubtedly there are — to whom natural science in the hands of an inspiring teacher appeals with irresistible delight. Accordingly, the second principle is that these boys, who may be called the specialists in natural science, should enjoy a liberal opportunity of spending time and energy for some considerable period upon their favorite study.

3. It would be easy to multiply examples of the limitations under which educational subjects must be generally studied; but the point is perhaps sufficiently clear. It must be allowed, however, that educational science will have done but half its work and will have achieved only a negative success if it merely keeps the pupil on the common lines of culture, teaching him only such subjects as other boys are taught, and at the best guarding him from waste of his time upon subjects which may prove irrelevant or prejudicial to his ultimate purpose in life. For education can never attain a high success by universality; it is only so far as it is special that it is scientific. In a world of illimitable variety, where no two waves of the wide ocean nor two leaves in the windy forest are alike, it is only by paying regard to individualities of temper, taste, ability and opportunity that the educational years can be used with best effect. All the preparatory part of education has for its object the discovery of the true individual goal.

It is thus that educational reform postulates the association of one master with a boy in his intellectual interests from the beginning to the end of his public school life. Such an association is the essence of the tutorial system, as it is called, which exists in many schools. The rapid change of forms and classes, as a boy progresses through the school, is compensated by the stability of the pupil room. It is evident how large a degree of patience, tact, and sympathy is required of a master in this position. He must have a keen appreciation of moral and intellectual character, a sensitive skill in developing the germs of acquisitiveness, and a wise discretion in stimulating and controlling ambition. But difficult as the office is, it is indispensable. In a school which is organized on the highest educational principles, the tutorial system, although no doubt it is expensive, or some other system of corresponding scope and efficiency, will hold its ground, as affording a unique opportunity. For it is the master who has welcomed a boy at his first coming to the school, who has worked with him and for him, who has followed him in his intellectual failures and victories, and who can judge of his future by an intimate knowledge of his past — it is he who will be his natural counsellor when the day comes for deciding upon the special character or direction of his industry. For every boy possesses, or, if he be wisely disciplined, will possess, a certain faculty ; there is something which he can do, I will not say better than other boys, but at all events better than he can do anything else ; and until it is ascertained what this is, and he is enabled and encouraged to take it up and follow it out and spend his happy store of energies upon it, his education will be at best a partial failure. If it be only the manual skill of carpentering which a boy possesses, yet so long as he does not fall short of the culture which has been described as indispensable or primary, it is right that he should develop and improve this skill. For it is here that public schools must be held responsible for many failures. It has too often happened in the past that boys have been compelled throughout their school life to work at subjects which were distasteful to them, and have been prevented from working at such subjects as were in their nature attractive and interesting. The pathetic story, which Mr. Darwin used to relate, of his great classical headmaster at Shrewsbury calling him a *poco curante* and solemnly cautioning him against the waste of precious time upon those chemical and entomological studies which formed the groundwork of his illustrious speculations, is a warning that may well be laid to heart. To discover a boy's aptitude and to encourage it is the whole duty of the schoolmaster. For it is just the boys of distinctive character and intellectuality who suffer most from a Procrustean education. The commonplace is the besetting sin of public schools ; they have sacrificed the genius to the dullard. And as the pressure of examinations has become greater, and there has been an increasing need and desire to pass all boys, whether clever or stupid, ambitious or sluggish, through the same educational processes to the same intellectual results, boys have more and more been bereft of the leisure which, if it was liable to be abused, as indeed it was, by idle and indifferent boys, was yet the one means, which existed in old days, of affording an intellectual opportunity and encouragement to such boys as were moved by a genuine love of self-culture. It may be true that the majority of boys at Eton and Harrow receive a better education at the present time than they received at the beginning of the century, but it may be doubted if any boys receive as good an education as some select boys received, or, to speak more accurately, gave themselves then. Perhaps the schoolmaster, like the examiner, is too ubiquitous; he has forgotten the art of leaving boys alone. But if it would be an abnegation of educational science to provide all boys with unlimited leisure in the hope that some of them will be disposed to use it wisely, it is worth while to see if there is no possibility of supplying in an educational system the variety of culture which was formerly furnished, if at all, by the boys for themselves. This will be one way, and it may be doubted if there is any other, of meeting the large demand now made on educational science by the multiplication of intellectual subjects and interests. It is recommended by practical as well as by theoretical considerations. For it must be remembered that the public schools stand in relation not to the Universities only or perhaps chiefly, but to many widely different lines of life — the army, the public services, engineering, medicine, commerce, and so on — and to the numerous examinations which open or block the avenue to them. It remains, therefore, to consider the adaptation of the public school system to this large demand.

It may be laid down as generally true that a boy's intellectuality, if it be determined at the age of sixteen, or about that age — and it cannot be determined with any assurance at a much earlier age — may be expected to develop itself in one of four different lines.

Thus he may be qualified for the special discipline which is known by long usage as a classical education. It is an education which will always hold its ground. The languages and literatures of Greece and Rome occupy too eminent a place in human history, they stand in too intimate a relation to the beliefs, inheritances, discoveries, and laws of modern society to be treated as ordinary subjects. They enjoy the prestige of educational antiquity, as having been taught to generations of schoolboys; for a subject takes rank, by a curious process, in a school according to the time that it has formed a part of the curriculum Nor is it too much to say that if one educational subject only were to be chosen as invigorating and disciplining the mind, none would be superior, and perhaps none equal, to the classical languages. The precision of their grammar, the strength and beauty of their literature, the dignified models which they offer for imitation, their detachment of time and place from contemporary politics, their contiguity to modern theology, history, literature, and even science, the fine and subtle exercise of translation and composition which are never so valuable as in interpreting the thoughts of the old civilization to the new or of the new to the old, induce the hope and belief that a classical education in its full range may long be sought by a large proportion of the most intelligent and assiduous boys in public schools. But such an education is exacting and absorbing. By its fierce competitions at the University and elsewhere, and by the high proficiency demanded in them, it leaves little time for a general or non-classical culture. For the classical student in the later years of his school life will be called to devote himself not only to classical learning in its principal literary forms, but to composition in prose and verse, philology, criticism, ancient history, and even archæology. In order to become a scholar he must sacrifice some part of the learning which lies outside classical scholarship. It is important therefore to insist upon the permanent value of the primary educational subjects to classical students. A classic is not well educated, if he be only a classic. But except in so far as the primary subjects claim his attention throughout the whole course of his school life, he will, in his later years, concentrate his industry upon classics. It can hardly be feared that under such conditions classical scholarship, though it may be somewhat less widely diffused, will not be carried to the same high point of perfection as it is at present.

Again, it may appear that a boy is qualified by his tastes or abilities for advanced mathematical study. The public schools have not achieved in mathematics the success which it would be reasonable to expect of them. They have sent out, I suppose, as many as ten distinguished classics for one distinguished mathematician. Nor is it easy to ascertain the cause of this marked difference.

The atmosphere of a public school is not essentially noxious to mathematics. But it may be suspected that the mathematicians have not enjoyed the indispensable power of concentration upon their own subject. The academical competitions have been as severe in mathematics as in classics; but the expenditure of time upon mathematical study in the schools has been inadequate. And, if so, it may be urged that while it is requisite to preserve a true intellectual balance among mathematicians by an adherence to the primary educational subjects throughout a boy's school life, it is not less requisite to liberate a large amount of time in his later years for special mathematical study. The mathematician, then, will give a certain amount of his school hours to the subjects which he shares with other cultivated people; but all the rest of them he will give to mathematics.

It will be the same with the other intellectual developments which are probable or possible in boyhood. For there are boys who display a strong literary interest, yet not such as generally finds satisfaction in the literatures of ancient Greece and Rome. They are some of the most interesting boys with whom a schoolmaster deals. They need such an element of classicality as will afford them an understanding of the classical conceptions and influences which have entered into the intellectual life of the modern world. They may derive it partly from the study of the Latin language and literature as an element of the primary education, and partly from such a familiarization with ancient thought as books of translation and interpretation can afford. But the most part of their optional time they will spend, as specialists, upon the languages and literatures of modern Europe. It will sometimes be English, in its grammar, literature, and history, and sometimes again French or German, which will be made their particular study. And, whether it be their own language or another, it can be combined with a greater or less amount of such subjects as mathematics or natural science. But if once the possibility of basing a liberal education upon modern languages is recognized, it becomes the duty of educational science to provide for it; and the opportunity of providing for it will be found in the same principle of elasticity which has been suggested as supplying an education in the higher classics or mathematics.

Or again, let it be supposed that a boy's taste is such as inclines him to the special study of natural science. It is necessary to make a broad distinction between the elementary instruction in natural science which, in the form of physics and botany, as has been suggested, or in some other form, will necessarily enter into the education of all boys, and the special or advanced instruction which will be offered to boys of distinct scientific capacity. For, if there are boys who desire to specialize in natural science — not in physics and botany alone, but in any such branch, theoretical or practical, of natural science as may fall within the scope and range of the educational years — then the schoolmaster must discover and encourage them and afford them the chance of developing their taste. It may be held, not without some reason, that these boys need especially to be guarded by legislation against the limiting tendency of their favourite study. But it is always true, and not in science alone, that an educational system which rewards proficiency in one subject, whatever it may be, is prejudicial to a proper intellectual culture. If it is right to encourage a partial specialization in all boys, it is wrong to allow a complete specialization to any boy. A public school ought not to exhibit the spectacle of a boy devoting himself exclusively to one subject. But assuming that the boy who specializes in natural science has acquired and maintains the indispensable knowledge of the primary subjects as already defined, I think it reasonable that, like the specialists in other subjects, he should, after a certain age, and within certain limits, be allowed to spend his time not indeed exclusively, but predominantly upon science. It is my hope that the men of science, who have long insisted upon the due recognition of scientific study in public schools, will see a just satisfaction of their demand in such an opportunity as has been here suggested.

To sum up then: the intellectuality of boyhood, so far as it is capable of determination at the age of sixteen, may be expected to develop itself in one of four main lines of study. It will be open to boys under a sufficiently elastic time-table to follow out any one of these lines. If it is asked how the time should be proportionately divided in the later years of a boy's school life between the primary or compulsory subjects on the one hand, and the secondary or optional subjects on the other, it may be said that this is a practical question which may be differently answered by persons who will agree in the general principle of this paper; but it is my opinion that, if a boy spends one half of his time upon the subjects which he must learn in common with other boys, he may well spend the other half upon such subject or subjects as may be appropriate to his individual case. For it must be remembered that the subject or subjects which he studies specially will, as a rule, be comprised also among the subjects forming the body of the common or primary education. No doubt it will sometimes be desirable to combine two lines of study for an examinational or other purpose; nor can there be any difficulty in effecting such a combination. For if it is the wish of the authorities in the public examinations to co-operate actively and efficiently with the schools, it may be expected that the schools will, within reasonable limits, accommodate their system to the public examinations. The closer the relation between the services of State and the schools, the better will it be for them both. All that is needed is a certain stability in the requirements of the public examinations and a certain elasticity in the system of the schools. Still the schoolmaster will not consider it his chief duty to pass boys through their public examinations, but to inspire them, if he can, with a love of learning.

Modern schoolmasters have been too eager for results. They have counted up the successes of their pupils at twelve or fifteen or nineteen. But a success at twelve is not worth having if it implies a failure at fifteen, nor a success at fifteen if it implies a failure at nineteen, nor a success at nineteen if it implies a failure in after life. Here lies the danger of courting premature development by competition for scholarships, or by other means. Nature exacts a penalty for haste as well as for disobedience. She forbids the fruits of teaching to be forced.

A boy's school life, so far as it falls within the view of this paper, is broadly divisible into three parts. The first of these extends from the age of ten to thirteen or fourteen, the second from fourteen to sixteen, the third from sixteen to the end. In the first his education will be limited to the subjects of primary and universal value, and to these treated simply and effectively. He will learn Latin and French and elementary mathematics, English grammar, history, and geography, and such simple facts of Nature as can be taught in the open air. So far he will remain in the hands of his preparatory schoolmaster. Between thirteen and fourteen he will pass into the public school. If he begins his public school life earlier, he will be too young to bear its liberty; if later he will be too old to imbibe its spirit. Soon afterwards it will be necessary to decide whether the literary part of his education shall take its colour from the literature of the ancient or of the modern world — in other words, whether he shall or shall not learn Greek. If he learns Greek, it will necessarily occupy much of his time in the next two years; if not, he will expend the time so saved upon German and additional French or mathematics. These are the years, too, in which he will best acquire the indispensable *minimum* of scientific knowledge. But neither in these years not at any later time will he be permitted to abandon the main body of the primary subjects, although it may happen that towards the end of his school life he will not retain his hold upon them all. At sixteen he will make the great choice of his life. In making it, he will be guided by his tastes, faculties, needs, and opportunities. Whatever it be that he is led to study in the four great educational lines — classical, mathematical, modern, and scientific — he will devote at least half his time to it. It may well be hoped that an education so definite, yet so elastic, will correspond to the large variety of educational demands. At all events it seems to possess the following merits: —

Firstly, it ensures a certain community of intellectual property among all educated or cultivated people. Secondly, it provides an education worthy of an age which is rich in literary and scientific works and interests. Thirdly, it allows every boy the chance of developing whatever may be his individual ability. Fourthly, it opens up a large field for the intellectual activities of masters, giving every master the power of teaching his favourite subject. And lastly, it supplies a means of preparing boys for the numerous purposes and conditions of life, and of passing them through their requisite examinations without a sacrifice of the scholastic system.

The educational plan which I have sketched is not proposed without some practical experience. It embodies the thoughts of one who is engaged in education, who feels the difficulties lying about it at the present time, and who thinks, though diffidently, that he sees the light shining through them. It will be well if it leads educationists of larger wisdom and experience than myself to discuss the educational problem without reserve. But it will be still better if it helps to dispel the false idea that schoolmasters are wedded to remote and antiquated theories, and, in Locke's words, suit their education "to what they have and not to what their pupils want"; and if it tends to restore and reinforce a confidence between the parents who send their boys to public schools, and the masters who are charged with the sacred task of training them.

THE STUDY OF ENGLISH IN PREPARATORY SCHOOLS AND COLLEGES.

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WHATEVER difference of opinion exists among educators regarding the propriety or the impropriety of teaching the English tongue in the common schools of our country, I am persuaded that all believe that it should have a share of attention in our higher institutions of learning. The old idea, which lived on long after the causes that gave it birth had vanished — the old idea that English is a raw and rude speech, a vulgar tongue, fit only for the use of the ignorant and the vile — no longer has influence over the minds of men. While our colleges may not yet devote a sufficient time to its study; while we may not yet have discovered the very best methods of teaching its use; still, we have come at last to cherish a feeling of pride in our English tongue. And rightly too; for, if we may believe the word of those qualified to judge, take it all in all, it is not inferior in richness and strength to any other language living or dead.

> "Greek's a harp we love to hear;
> Latin is a trumpet clear;
> Spanish like an organ swells;
> Italian rings her silver bells;
> France with many a frolic mien
> Tunes her sprightly violin;
> Loud the German rolls his drum,
> When Russia's clashing cymbals come;
> But Briton's sons may well rejoice
> For English is the human voice."

Not a few thoughtful men fondly believe it destined to become the universal language, the world speech. Professor von Döllinger concedes that the intellectual primacy of the world is certain to fall to these English speaking men, the Anglo-Saxons, as in ancient times it fell to the Greeks and the Romans. "The Germans," says the great German scholar, "will certainly have no small share in the intellectual world of the future, but that will be only indirectly and through the medium of the English language."

While all agree that English deserves a share of attention in our higher institutions, many believe that it may rightly demand a more generous share than it has yet received. Mr. Hudson says:—"It is a notorious fact that among our highly educated people, the graduates of our colleges, really good English scholars are rare." Professor Townsend says: "Nearly every graduate of our colleges appears to better advantage in almost every other department than in English writing and speech."

It is not difficult to discover the cause of the learned graduate's comparative ignorance of his vernacular. Its study has been neglected. All colleges with praiseworthy earnestness have endeavored to teach the dead and the foreign languages, and the circle of the sciences; a few only with equal earnestness have also endeavored to make the student as complete a master of his mother tongue as he is capable of becoming in youth.

I need not argue that an ability to speak and to write well is, properly considered, one of the chief objects of a college education. The worth of this ability in our time, indeed, could scarcely be overestimated. When one hears a thing to be able to tell it; when one sees a thing to be able to describe it; when one knows a thing to be able to teach it; and when one believes a thing to be able to make others believe it; these faculties constitute a power as useful as it is splendid and rare. Whatever else be not taught in the American college, English should be. John Locke, wiser than his time, said, "If a gentleman study any language, it ought to be that of his own country that he may understand the language which he has constant use of, with the utmost accuracy."

I do not hold with De Foe that we need to project academies for the improvement of the English tongue; but the colleges already founded ought to furnish, not only a more thorough course in English, but especially a more extended, practical training in its use. When they shall consent to do this, the graduate's disgraceful ignorance of his native speech will no longer be their reproach.

The practical course that I have in mind is to be discriminated on the one hand from the sister arts, formal rhetoric and logic; and on the other, from the sister sciences, etymology and philology. Its paramount object is not the aquisition of knowledge regarding English, important as this is, but skill in the use of English. Therefore, since in all training time is an indispensable element, this course should extend over the four years of student life. Beginning with the raw freshman's first day in college, it should end only with the polished senior's final bow from the Commencement platform.

Further, the course should be required. To make it optional, or elective would restrict its benefits to the few; to the very few who least need them. There is often a disinclination, not to say aversion, to the tasks both of composition and of public speaking. As individual experience no doubt recalls, it is not infrequently hard, in either or both these exacting arts, for one "to take up the ply." And, therefore, the tyro needs oversight, encouragement, urging. Can it be supposed that the skilful performer on the violin or the piano ever would have acquired his astonishing proficiency if his studies from the first had been optional; if he had not in youth been required by parent and tutor to go through the elementary drudgery of his now delightful art? Can one believe that the graduate of West Point ever would have mastered his profession; ever would have gained his admirable exactness and precision of movement and bearing, his thorough knowledge of the evolutions of the parade and the field, had not the stern duties, the monotonous and fatiguing drills of the famous academy been required?

The colleges seem to be passing through a transition stage, each year according a wider election of studies to the student. Of this I do not complain, but I do say: — let every other study in the curriculum be elective, or optional, but, for the sake of the student as well as the reputation of the college and the honor of our language, let every man be required to go through the whole course in English composition and speech.

Supposing then this course to extend through the entire four years of college life, half of the time may well be employed in training the students in the essay or literary style of writing; a fourth in training them in the rhetorical, or forensic; and a fourth in training them in the art of delivery, or elocution. One hour a week will suffice to attain the somewhat modest objects of the course. For convenience in recitation, the men may be divided into sections of about twenty, each section meeting the professor once a week.

In order to carry out its purpose this course must furnish *much actual practice in the arts of writing and of speaking*. To write or to speak well, one must write or speak much. Sir Thomas Wilson more than three hundred and forty years ago in his "Arte of Rhetoric," the first book on the subject in our language, said: "When the student hath gotte plentifully, he must use much exercise. For though he have a wit and learning together, yet shall they bothe little avail without much practice. What maketh the lawyer have such utterance? Practice. What maketh the preacher speak so roundly? Practice. Yea, what maketh women go so fast away with their words? Marry, practice, I warrant you. Therefore in all faculties, diligent practice and earnest exercise are the only things that make men prove excellent."

The truth thus quaintly put could be exemplified from the lives of celebrated authors. Each served an apprenticeship in the writer's craft, and then worked for journeyman's wages; until in good time he rose to be a master. The figure, indeed, is not inapt. A writer as well as a carpenter is a mechanic. The carpenter joins woods; the writer, words. No man may join either neatly without training. The common idea regarding great authors is wholly wrong. Each had to learn his trade.

> "The heights by great men reached and kept
> Were not attained by sudden flight;
> But they while their companions slept
> Were toiling upward through the night."

How much practice should this course furnish? Probably, it is impossible to give an answer that will not be subject to modification,—an answer that will fit equally well each and every college. Still, I venture to suggest that not fewer than ten original themes should be required annually of each man. This gives thirty for the three years devoted to composition. More than this, each essay, or oration, after correction by the instructor, should be handed back to the student to be carefully re-written and then returned to the instructor for his final inspection. Thus, since "revision is a new creation," each man really writes sixty themes, each varying in length from 1500 to 2000 words. Who can doubt that such an amount of practice, provided it be intelligent, will go far towards clothing the diligent student with power to put his thoughts correctly and effectively on paper? In addition, he should receive during one year sufficient instruction in the manly art of delivery to enable him to face an audience without either affectation or embarrassment and to speak out his thoughts with a respectable degree of ease, propriety and force. Provided, of course, the *practice be intelligent*. This qualification is more important than might at first appear. Mere practice, blind and unguided, is not improving; on the contrary, it leads away from skill and power. "Practice makes perfect" only when wise and enlightened; then it becomes the parent of dexterity and power.

The question naturally arises, how may the student's practice be made intelligent and improving? I answer: —

First, the course must furnish a fair and helpful knowledge of the rules and principles of writing and of speaking.

Strangely enough men differ in opinion as to the practical value of the rules and laws of style. Dr. Latham says, "Gross vulgarity is a fault to be prevented; but the proper prevention is to be got from habit not rules." Others boldly assert that rules are worthless, because they say no good writer while writing is conscious of their existence. There is just enough truth in the last clause of this statement to make it plausible and dangerous. While the finished writer does not write *by* rules, he does write according *to* them. Moreover, he does not send his manuscript to the printer until with anxious care he has retouched his work by the light they throw upon his art. Even Spencer admits that some practical results may be expected from a familiarity with the principles of style. "And, if in no other way, yet in facilitating revision, a knowledge of the thing to be achieved, a clear idea of what constitutes a beauty and what a blemish cannot fail to be of service."

My experience inclines me to go further than the illustrious philosopher seems willing to go. All art is based on rule and law. "All art," says Goethe, "is preceded by a certain mechanical expertness." I believe that while acquiring this mechanical expertness, this preliminary skill, the student needs the assistance of those rules which the master of the art of writing summons to his aid only in the hour of critical revision.

In the weekly meetings of the sections, the professor will find his best opportunity to give help and instruction in the rules and principles of composition. The merits and the faults of the essays previously corrected will here be pointed out, and the rhetorical laws observed or violated can be clearly set forth and amply illustrated. Here, too, the rules for such small, but necessary matters, as spacing, underscoring, indenting, capitalization, spelling, punctuation, etc., will receive such attention as the papers show is needed.

The mention of these elementary things leads me to say that the professor must adapt his instructions to the wants of his classes. It is granted that he has a right to expect that elementary principles will be taught in their proper place, in the academy or high school. Still, his sense of the dignity of his chair should not prevent him from teaching even simple things, if the student be ignorant of them. Teach what the student needs to know, and let dignity look out for itself. After all, is dignity the most valuable of the qualifications of a professor? One cannot help sometimes recalling the words of the Rev. Sam Jones: — "The more dignity a man has, the nearer dead he is. The most dignified man I ever saw was a corpse."

I indeed wish that all preparatory schools would do their whole duty by the men they send up to college. The truth is, however, that not a few men of fair information and good intellect enter our colleges without a sufficient training in these very elementary, but not unimportant things. And so this course should supply the deficiency by giving the necessary training. Let the instructor shoot at the mark, not aim above it. What sense or philosophy is there in lecturing a man on the highest qualities of style when he does not yet know how to punctuate, or to spell, or to paragraph?

In these meetings the professor may also aid his students greatly by bringing to their attention the characteristics of the kind of writing involved in the next exercise. For example: before assigning the composition of a story, a description, an essay, an argument, an oration, a biography, or a criticism, he can point out the distinctive qualities of the tale, the essay, the oration, etc., illustrating these qualities as time permits by readings from representative authors.

Nor need he stop here. In addition to this very helpful instruction and criticism, he may read for the future edification of his classes, a series of formal lectures upon the theory of his art. To confer an additional interest upon these lectures the sections of each class might meet together on the days of their delivery, each man with his note-book.

While in this proposed practical course in composition no provision has been made for a text-book, still I feel sure it will appear after a fair trial that a sufficient knowledge of the rules and theory of the art has been communicated to aid appreciably in making all practice intelligent and therefore improving.

Secondly, that practice be intelligent, the course must include the critical study of masterpieces. The light of example as well as of law must fall upon every foot of the student's way. No blind practice in writing, however unwearied, no knowledge of the theory of writing, however exhaustive, of themselves can enable a man to write well. He must sit at the feet of the masters of English style. If a man would write good English, he must read constantly the best English. Thus Dryden, "to write well one must have frequent habitudes with the best company." Thus Spencer, "He who daily hears and reads well-framed sentences will naturally tend more or less to use similar ones." Thus Whatley, "Let the student study the best models, mark their beauties of style and dwell upon them; then he may insensibly catch the habit of expressing himself with elegance." The subtler graces and charms of style in a sense are unteachable; they cannot even be appreciated until thus seen in the full blaze of their associated beauty upon the author's page.

I am wrong. The finest properties of style are not visible, but audible. They cannot be seen; they may be heard. Burke held that all discourse should be written as if it were to be spoken; and Bentley, as the final, highest test of a good style, gave pronunciability. Hence we may regret that the art of reading aloud, a fine and unselfish accomplishment, is falling into a state of noxious desuetude. In fact the only way to read critically is to read orally. Is it possible to conceive the magnificence of the impassioned prose of De Quincey or of Ruskin unless the voice shall make it audible? Is it possible to conceive the varied, majestic music of Milton's verse unless the melting voice run through its mazes

> "Untwisting all the chains that tie
> The hidden soul of harmony"?

The student should read aloud from the masters, and the rhythm and euphony inseparable from finished style will reach the soul through the only avenue they can travel, the educated, educating ear. Success in acquiring a clear, idiomatic, nervous style will depend largely upon the choice of books and upon the mode of reading books. This critical study of masterpieces in connection with a study of the rules and causes of style can scarcely fail, it seems to me, to make all practice intelligent, improving, interesting.

It will encourage the student to know that a faithful, intelligent discharge of the duties of this department will aid him directly with his work in all other departments; that it will aid him in his society exercises as well as in the preparation of his final thesis and oration; and that, best of all, the skill thus gained in writing and in speaking will go with him always to assist him in his endeavor to win honors in the severer university of active life.

PREPARATORY WORK IN GREEK.

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It is probable that, in proportion to the difficulty of the subject and to the time devoted to it, preparatory work in Greek is better done than preparatory work in Latin. Latin is usually commenced before Greek, and the poorest pupils — those who have little inclination or capacity for language study — are weeded out before they come to the latter language. The pupils who begin Greek know from some experience how to study a language and are able to profit by the failures they have made in their past work. It is also true that in many public high schools the beginning work in Latin is entrusted to less competent teachers. The greatest difficulty in preparatory work in Greek is the short time which can usually be devoted to it.

It should be remembered that our aim in teaching Greek is somewhat different from that in teaching a modern language. Much has been said lately about making Greek a living language to the pupil. But we do not aim to teach pupils to speak Greek, nor, indeed, to write it, further than is necessary to understand well its grammar. In this utilitarian age such command of a dead language must be left to its specialists. It is worth much to know the structure and laws of such a magnificent language as the Greek. As Higginson has well said, "There is no more choice in language than there is in stones; and Greek, the language of sculptors, is the only one that has the texture of marble." But the real reason why we study Greek is to come in contact with its literature. A distinguished critic has declared that we cannot make a list of a dozen masterpieces of the world's literature of which half shall not be Greek. We do not need such devices as the conversational method to arouse an interest in the language; though some conversational practice for the purpose of training the ear and impressing on the memory the concords and elementary facts of grammar is valuable.

Some excellent elementary text-books in Greek seem to be constructed upon the principle that the pupil should learn almost all the exceptions of Greek grammar before he is allowed to translate

Xenophon. This seems to me to be a mistake. There is no better way to learn the principles of the Greek language than by the study of some portion of its literature; and we fortunately have in the Anabasis of Xenophon a classic admirably adapted to elementary instruction. I have found the practice of beginning directly with Xenophon to yield at first discouragingly slow results and to be productive of a haphazard way of learning the inflections. I prefer to devote about three months to having the class learn the inflections of the grammar, with practice at the same time in simple translation and composition. When the important part of each recitation is the inflections, I find that a class will learn them more thoroughly in a short time than they will in a longer time when they deem them subordinate to something else.

As soon as a class have learned the inflections, they ought to commence reading Xenophon. There is a sense of progress in reading a classic author which cannot be had from a lesson book, and the pupil will take hold of the work with much more animation and vigor. Omitting the third chapter at the first reading, the first book of the Anabasis will be found easy and pleasant reading for a beginning class; and it will be no more difficult for them to learn the facts of Greek construction from the pages of a classic author than from the disjointed sentences of a lesson book.

The only difficulty which beginners in Greek who have had some experience with Latin have in translating the Anabasis is to find the verbs in the vocabulary with readiness. I have found it a good expedient, for several weeks after a class begins the Anabasis, to go over the verbs of each lesson in advance, having the class analyze them and determine the form or possible forms to be looked for in the vocabulary. When the habit has been acquired of thinking of the changes a form may have undergone and the laws which govern these changes, pupils will have little further difficulty with the verb.

It is specially important that the pupil have a mastery of all the forms and inflections of the grammar before he completes his preparatory course. This is really a difficult matter; and the teacher is apt to think that a class is letter perfect when their knowledge is still quite fragmentary. Some drill in form and inflection is needed all through the preparatory work; and as the ear of the average pupil is seldom keen enough to hold fine distinctions of sound, a portion of it must be written. It is sometimes a convenient method of review to have a class devote its attention to one set of forms.

For instance, on one day we may call for a synopsis of the forms of the aorist tense, active, middle and passive, of all the principal verbs running back through a number of lessons. On another day, the class may write out the inflection of all the typical nouns of the third declension occurring in several pages.

I have usually made use of Jones's work in composition in order to get a systematic review of the grammar in connection with writing Greek. But one of the most valuable exercises to fix in mind the ordinary constructions and to make the pupil ready in their use, I have found to be brief imitative exercises, sometimes oral, sometimes written, upon the sections of the Anabasis which the class were reading. There is need, however, to choose these exercises a little carefully or they will cover so wide a range that they will not serve to emphasize those points of grammar which it is important to have well fixed in the pupil's mind.

Reading at sight — instruction in the way of attacking a new Greek sentence, and frequent tests of a pupil's methods and ability in this direction — is an important element in Greek preparatory work. The first requisite for reading Greek at sight is that the pupil should readily recognize the words which he knows. In the early part of his course, therefore, review reading is an admirable exercise in sight reading. This should not be a review of the previous lesson, which is, of course, a part of the regular work, but the reading at sight of considerable sections of ground which the class has passed over. If pupils stumble in this, it reveals to the teacher the places where their work has been weak; while their success in reading several pages rapidly is a great encouragement to them and makes them feel that it is possible to acquire the ability really to read Greek. It is a good plan to encourage in individual pupils the practice of much review reading. The odd half hours spent in this way will yield them a large return in increased command of the language.

I have found no authors as suitable for sight reading as those which the class were studying at the time. The pupils were more interested because it was a part of work which they felt they must do; while the teacher was saved trouble because the class had their text-books always at hand. If a little care is taken in selecting passages for translation at sight, the author in hand will be found as suitable as some special text-book. A class which has read the first book of the Anabasis will find many passages in the second book which they will be able to handle; while a class which has gone over two books thoroughly can do much good sight reading in the third and fourth.

The syntax of the cases is usually mastered by the pupil with comparative ease from its similarity to the Latin. The uses of the moods and tenses, however, cause him more trouble. The best way to fix the ordinary uses of the moods in his mind is practice in composing very simple sentences to illustrate them. The admirable sentences in Jones under these heads need to be largely supplemented by the teacher in order to give a good command of the ordinary constructions. The niceties of usage in Greek syntax are more properly subjects of college instruction. I think that we sometimes pay attention to exceptions and fine points in Greek grammar in the preparatory course which had better be left for a more advanced stage of the pupil's progress. The force of these delicate variations from ordinary usage is not appreciated by the pupil unless he has a firm grasp upon what constitutes ordinary usage.

The time devoted to Homer is probably the most enjoyable part of the work to both teacher and pupil. The scansion is already practically known, because the pupil has learned the laws of hexameter verse while reading Virgil. A lesson or two upon those points in which the verse of Homer differs from that of Virgil is all that is needed for metrical reading. The greater freedom of the Homeric verse needs to be pointed out, and the effect of this freedom upon its rhythm and movement. The pupil needs much practice in the metrical reading of Homer. To read the Greek of Homer with accuracy, spirit and expression, fully marking the rhythm and yet not allowing it to obscure the sense, is for the average pupil a task of much difficulty. The Greeks were no doubt rapid speakers, and it explains many Greek constructions to keep this fact in mind. But in reading Homer I have obtained the best results by requiring pupils at first to read somewhat slowly, so that they could be understood by a person who did not have the book and who listened with dull English ears.

The dialect of Homer is an important and sometimes troublesome matter. There is, first, the difficulty of learning it, and, second, the difficulty of preventing its corrupting the Attic forms which are liable to be none too well fixed in the pupil's mind. A serviceable expedient is to have written frequently upon the blackboard the Attic inflection of words often met with in the Homeric dialect. In this way the fact can be emphasized that the dialect of Homer is exceptional. The final work ought to be a systematic review of the subject, such, for instance, as is found in the admirable introduction on the dialect in Keep's Homer. The fact that there is such a thing as the Homeric question ought not to be passed over; but it is sufficient for preparatory work that its salient points be briefly stated. It may be left for further development by the college professor.

The one thing which, above all else, ought not to be lost sight of in teaching Homer is the fact that he is a great poet. The teacher who has not an enthusiastic and abiding conviction of Homer's greatness ought not to be allowed the privilege of teaching him to awakening minds. When the pupil comes in contact with an author so fresh, so inspiring, so filled with the spirit of the world's youth, his first task is to learn to appreciate him. No excellence in the epic dialect or the peculiarities of Homeric syntax will atone for a spirit dead to the charm of a piece of literature which has delighted the world for twenty-five centuries. In the work of translation the pupil must find his teacher an inspiration and a model; it is the business of the teacher to translate with spirit and with elegance. It is fortunate that Homer is the poet who, more than any other, can be appreciated by young minds in a translation. The vigor and freshness of his narrative break through the barriers of language. One of my Greek pupils received a copy of Pope's translation for a Christmas gift. He was so interested in the book that he read it through the same day. I almost tremble at the responsibility of introducing such a boy to the study of Homer, lest the stream of his fresh enthusiasm be lost in the bogs and quicksands of uninteresting grammar.

An expedient which does much to quicken a pupil's interest is to have from time to time considerable passages of review translated rapidly and with spirit, the teacher taking his turn and giving tone and direction to the work. When a book has been completed, if reviews have been frequent and a class have their work well in hand, it is a good plan to give a review of the whole book for a lesson, reading in the class hour the passages which teacher and class think to be the most striking. A pupil cannot go over a book of Homer for a lesson without catching some of its spirit; it will always be more interesting reading to him afterwards. An aroused interest in the subject matter will also do much to make the drill in grammar endurable if not interesting. There is a large amount of drill work which must be done in the preparatory school. But the stimulus of an awakened interest will carry the pupil through much drudgery and make it seem a pleasure.

The function of the preparatory teacher of Greek is a humble though important one. He is to lay the foundation of the pupil's work in exact and well-arranged knowledge and systematic habits of study. But this foundation is, after all, not of very much value unless there is a disposition to erect the superstructure; and an important part of his work must be to inspire the pupil to go forward. If the teacher has not an enthusiastic admiration of the noble language and literature which he teaches, the best part of his work will be unfruitful.

SCHOOL REFORMS IN GERMANY.

C. H. THURBER.

We have long been accustomed to regard Germany as the country of all countries whose schools stood least in need of being reformed. In no other land have the schools formed such an integral part of the national life. The schools and the army have been the two great factors in bringing Germany to greatness. So far, however, from being contented with results already achieved, Germany has recently given a new proof of her claim to the highest rank in education by an agitation for reform and progress that took definite shape in the Conference which opened in Berlin on the fourth of last December.

The great interest taken by the Emperor in this movement, and the attention which he has devoted to it, as shown in his long and interesting opening speech before the Conference, made school reform for the time being the foremost topic in Germany.

It is so unique a spectacle to see the most powerful monarch in Europe addressing a body of schoolmen upon a purely educational question, that it is interesting to note upon what points the Emperor dwelt and to learn what his educational views are. His speech in full would be too long to translate here. After a cordial greeting, he referred to the fourteen questions that had been submitted by the

Minister of Instruction for the consideration of the Conference, and said that he wished to submit certain questions of his own. Of these the most important were: school hygiene, exclusive of gymnastic training; reduction of the amount of study; methods of teaching individual subjects; organization; examinations; overcrowding. Since 1870, said the Emperor, the schools have not been doing their duty to the country. Then they were the centres from which the idea of German unity permeated the whole people. When union was won, it became the duty of the schools to teach that it must be preserved. Centrifugal tendencies have been, however, strongly developed. "The chief reason is that since the year 1870 the philologians, as *beate possidentes*, have been enthroned in the gymnasia and have laid the chief emphasis upon the subject matter, on learning and knowing, and not on the formation of character and the needs of the life of today." "Less emphasis has been placed upon the 'can' than on the 'ken.'"

Proceeding, the Emperor speaks of the organization of the present gymnasia: "We must make German the basis of the gymnasium; we are to educate young Germans and not young Greeks and Romans." For Latin composition he had no good word to say. He wished that more attention should be paid to the modern history of Europe, especially of Germany, and less to ancient history. It was absolutely necessary that the amount of work required of the pupils should be lessened. He spoke of his own experience in the gymnasium in Cassel, in which those preparing for the examination were obliged to study five and a half, six and a half, or seven hours at home. "Add thereto six hours in the school, and two hours for eating, and you will see how much of the day remains." "A diminution in the amount taught is possible only by lessening the severity of the examinations." Speaking of the physical effects of the present system, the Emperor as a soldier, was filled with alarm. The percentage of short-sighted children was in some schools as high as 74 per cent. "I consider it of most pressing importance that the subject of hygiene shall be introduced into the normal schools, that every teacher shall have a course therein, and that every healthy teacher shall understand gymnastics and take gymnastic exercise every day." His closing words were: "Gentlemen, men are not to look at the world through spectacles, but with their own eyes, and are to find pleasure in that which they have before them, their native land and its institutions. To this end you are now to help."

The most important conclusions of the Conference which followed closely the lines laid down for it by the Emperor, may be summarized as follows:

1. In the future there shall be but two kinds of schools, Gymnasia, and the Realschule without Latin. The Gymnasia shall be for those who intend to become scholars, the Realschule for all others. The mixed schools, in which Latin, but not Greek, is taught will be abolished. Certain changes in the lower schools to adapt them to this change are also recommended.

2. If in the gymnasia the number of hours devoted to the study of Latin and Greek is to be reduced, Latin and Greek composition is to be dropped. Drawing is to be made obligatory in the lower classes and dropped out of the highest class. English is to be made a required study. Much greater emphasis is to be laid upon the study of the German language, German composition, and the proper use of the spoken language. Greater attention is to be paid to the recent history of Germany, without increasing the number of hours devoted to the general subject of history.

3. The decrease in the number of school hours must not entail an increase in the amount of home study. The consequent transfer of the principal part of the work to the school demands an improvement in the method of instruction.

4. In order that this better method may be acquired, and that teacher and pupil may fulfill the demands laid upon them, the following things are necessary:

a. Scientific pedagogic training of the teacher.

b. A better position for teachers as a class, in regard to all their outward relations.

c. Greater responsibility of the teacher for the bodily and mental welfare of the pupil.

d. Fostering of games and bodily exercises of all proper kinds, with gymnastic instruction, given as far as possible by teachers belonging to the institution.

e. Control of school hygiene by a school physician, and instruction of teachers and pupils in the elements of hygiene.

f. Instruction in the open air, so far as possible, in natural history, geography and local history.

With an occasional substitution of "English" and "The United States" for "German" and "Germany," there is much in the above to interest American educators. This Conference had no legislative power. But it consisted of forty-four of the first schoolmen in Germany, called together by the government, and it is reasonable to suppose that its conclusions will have an important influence upon the future development of the educational system of Germany. It is already rumored that the present Minister of Instruction, Herr von Gossler, will retire from office in the near future, for the reason that his views are not in harmony with the speech of the Emperor and the conclusions of the Conference.

Dresden, 17th December, 1890.

MORAL TONE IN THE SCHOOL.

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THE object of this inquiry is to emphasize the necessity of developing the emotions, as well as of teaching the intellect. The first part treats of the origin and the nature of the emotions and their physical basis. The second part applies to the school the conclusions educed.

The discussion assumes the existence of a thinking, feeling, willing soul, self, ego, I, and that this soul is substance and not mere activity. It assumes also the authority and the evidence of consciousness, and assuming that consciousness is relevant evidence in matters of *cognition*, it holds that consciousness is equally authoritative in the domain of *feeling;* that is, if consciousness evinces that *cognition is psychical*, it demonstrates with equal conclusiveness the *psychical nature of emotion*, or putting the argument in another form, if the formula, "I know," attributes "knowing" to the "I," the formula, "I feel" attributes, with equal positiveness, "feeling" to the "I." Accepting then the psychical character of the emotions this paper cannot agree with the teaching which holds that "The more closely I scrutinize my states, the more persuaded I become that whatever moods, affections and passions I have, are in very truth, constituted by, and made up of those bodily changes which we ordinarily call their expression or consequence,"* and "If I

*Psychology; James, Vol. II. p. 452.

were to become corporeally anæsthetic, I should be excluded from the life of the affections"; * in which statements themselves there seems to be their own refutation, since by attributing "moods" etc., to the "I" as the *haver*, the emotion is referred to something non-corporeal. Again the same author continues (p. 453), "each emotion is the resultant of a sum of elements and each element is caused by a physiological process of a sort already known. The elements are all organic changes and each of them is the reflex of the exciting object."

To hold the extreme view "that feeling is always merely a consciousness of a certain condition of the nervous elements" * makes the feeling as truly psychical, as to refer it to "a sort of secondary consciousness of the furtherance or hindrance of one idea by another."

Granting that the analysis of emotion is less satisfactory than the analysis of intellectual processes, and that a certain amount of hypothesis or assumption is involved in all explanations which have been offered, it still remains that the necessity of certain antecedent or concomitant conditions has been sufficiently established to warrant definite conclusions, which bear upon the problems of education.

This brings us to the inquiry, What is the relation of emotion to soul or self? What is its nature?

I can imagine to myself a percept, a recept, a concept, etc., inasmuch as these are *psychic forms;* that is, under proper conditions as stimuli *I resume a previous form;* but I fail when I attempt a similar treatment of emotion, notwithstanding my consciousness of emotion. I conclude that emotion is not psychic form, it is either an act or a quality of soul.

I am aware that instances can be cited, where emotion seems to antedate psychic activity, *e.g.*, fright from sudden noise without thought of danger, as when the playmate whom you are seeking, jumps unexpectedly from the lurking place; the writer cannot keep his eyes open when he fires a rifle or even snaps a cap, although there is no thought of danger; some men cannot become accustomed to the firing of cannon, but are completely possessed with fear; the inexplicable gloom, or despair attending certain forms of dyspepsia is well known to the medical profession; but in some cases, at least, a careful examination discloses the existence of a somewhat vaguely imagined danger or harm which is attended with fear. The writer has seen nervous children afraid of "being afraid," while they were not afraid of any specific thing, "simply afraid." In cases cited to show the purely physical cause of emotion, are there not usually certain antecedent conditions which show an active mental state especially imagination? or the ensuing conditions are exhaustion and amnesia, which effects are in nature negative, and consequently prove nothing. Thus, in certain cases of "precordial anxiety" the fear or dread has been traced to an imagined inability to breathe; but as soon as the patient could be assured of such ability, and that the feeling omened no ill, the fear subsided. I fail to see how such emotion is purely physical, or that it should be referred to a "purely bodily cause." The bodily discomfiture is unquestionably physical, but the emotion (fear, anxiety) is psychical; indeed different nerves are involved in the two experiences.

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* Physiological Psychology; Ladd, p. 499.

The writer recalls a personal friend, a thoroughly educated physician, who died after years of prolonged illness and acute suffering. The microscope showed the persistence of the same morbid conditions which years before were most excruciating, but which in later years were not heeded, except as attention was directed to them, the imagined forebodings of these conditions having long since ceased to exist, and with them the attendant emotions, fear and pain. The physical origin or the spontaneous origin of emotion is sometimes claimed from the following facts: in childhood and youth, the sensory motor tract of the cerebro-spinal nervous system is more active than it is in later life and the great sympathic nervous system is much more active at these periods; it is also known that the "higher cerebral centres" are not proportionately active; the emotions of childhood and youth are especially noticeable, the rapid and varied successions of emotions are known to every observer of child nature, the endless alternations of joy and grief, of quarrel and reconciliation; youth is impulsive and fickle. These facts associated quite naturally direct attention to the physical conditions as the source of emotion; but it must not be overlooked that childhood and youth are periods of active imagination and phantasy; air-castles and bad poetry characterize the age as much as nervous development. The emotions are as logically referred to the mental activity, as to the physical development.

I have attempted in the foregoing briefly to indicate some of the reasons, and some of the interpretations which point to a psychical origin of the emotions (sentiments,) and — with the possible exceptions of those appetites (hunger, sexual passion, etc.,) which are directly concerned in the preservation of the species and which seem to depend upon a complex of psychial and physical conditions, since they are excited, modified and controlled quite as much by psychical as by physical agencies — to show that emotion is the concomitant of psychic activity, or of all conscious life. This might be supplemented with the thought that each form of psychic activity is attended by its characteristic emotion, i. e., the kind of activity determines the character of the feeling. The argument is strengthened by two characteristics of the emotions, first, *they vary with their content*, i. e., with their simplicity or complexity; and second, *they possess rhythmic periodicity and intensity*, being represented by the swell in music <> and these variations seem comparable with and referrible to the clearness, the definiteness, and the positiveness of the mental image whose formation has been chiefly conducive to their awakening; joy, sorrow, love, hate, anger, etc., are readily analyzed and are found to follow this rhythmic law.

It may be objected that if emotion is the concomitant of intellection, strong emotion should be experienced simultaneously with great intellectual activity, whereas the incompatibility of intense emotion with sustained and elevated intellection is acknowledged; (witness "The passion was unreasonable"). To this objection it is answered, probably no intellectual activity is free from emotion, and little emotion exists without intellection, but unity of soul or self is only possible under the conditions found.

The innate character of emotion, as a concomitant of intellection — no hypothesis being offered as to whether it is due to resistance of ideas or to heightening or lowering of the same — having been established, we are led to inquire whether the emotions have a distinct physical basis, or

Along what channels do the emotions operate?

The distribution of the sensory nerves to the parts affected seems to put beyond question the reference of the purely sensuous feelings (sentience), touch, taste, smell (varieties of touch) and certain forms of bodily pain, to the cerebro-spinal system, which system is accepted as the physical basis of the intellectual life.

That the physical basis of emotion is distinct from the cerebro-spinal system, to which cognition is referred, is set forth by the eminent psychologist of Harvard, in the following extract: "In every art, in every science, there is the keen perception of certain relations being *right* or not, and there is the emotional flush and thrill consequent thereupon. And these are two things, not one. * * * * Emotion and cognition seem then parted, and cerebral processes are almost feelingless, so far as we can judge, until they summon help from parts below." *

That the emotions are operated through the sympathic nervous system may be argued as follows:

I. The universal practice of referring emotions to the viscera; as witnessed by the language employed in speaking of emotion, and by the names given to disease, e.g., "bowels yearn," "heart longs for," "melancholy," etc.

II. Language fails to convey emotion in the same way in which it conveys thought. Intellectual processes and results are transmitted through the medium of language with approximate accuracy, so that mind communicates with mind. Formulas in mathematics and logic, commands, requests, etc., etc., are conveyed by a first party to a second; but emotions excited by the presence of Niagara, Mount Blanc, or the Ocean refuse to be expressed. I do not apprehend the feelings of the traveler lost in the prairie storm, or upon the vast Sahara. These must be *felt* to be understood.

III. An attempt to reduce emotion to exact analysis and to the precise nomenclature of the intellect destroys the emotion, e.g., analyze the fervent letters of youth descriptive of emotion and the reading does not awaken what was felt.

IV. Men of large emotion, love, sympathy, generosity, philanthropy, etc., are men endowed with robust, vigorous constitutions, if not always with well developed physiques, and are not necessarily educated men.

The great student of human nature, ignorant of books, but not ignorant of men, knew the philosophy of life when he made Cæsar say,

> "Let me have men about me that are fat:
> Sleek-headed men, and such as sleep o'nights;
> Yond Cassius hath a lean and hungry look;
> He thinks too much: such men are dangerous." †

V. The emotions have marked action upon the vaso-motor nerves, as witnessed by pallor, blushing, lesions, etc., attending fear, shame, anger, etc.; by change in the character and the quantity of secretions, especially in the mammary and the tear glands, kidneys, gastric glands, etc. Grief and anxiety impair nutrition, sorrow or joy excites tears. The action of emotion upon heart-beat is generally understood.

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* Psychology; James. Vol. II. p. 472.

† Julius Cæsar, Act I. Sc. II.

VI. Conversely, physical conditions affecting the vaso-motor nerves induce corresponding emotion. Arrested digestion causes anxiety; hypnotism is induced by forcibly holding the body rigid; melancholy results from abnormal liver, etc. The various forms of insanity traceable to deranged bodily functions are all in evidence.

VII. Certain emotions awakened by color are unquestionably referrible to the sympathic nerves as their immediate cause, e.g., gloom, oppression, occasioned by black; cheerfulness caused by light green; excitement associated with red; feeling of cool, quiet, with dark blue; of warmth with yellow, etc. The writer knows an educated teacher, in whom certain discordant shades of red will induce severe sick-headache, even if he is not conscious of their presence, his first warning being the "feeling," and subsequent investigation disclosing the cause.

VIII. The possibility of arousing certain emotions by assuming the characteristic attitude, e.g., the attitude of anger will excite anger; the facial expression of mirth excites mirth, etc. One can make himself sad by assuming a sad countenance. Fechner says: "One may find by one's own observation that the *imitation* of the bodily expression of a mental condition makes us understand it much better than the mere looking on."

Compel a child to keep a smooth brow, to sit erect, and to use a cheerful tone and he necessarily grows cheerful and loses his morbidity. We *force* a cheerful tone of mind. "There is no surer way to check anger, mirth, or any other passion or sentiment than to compel ourselves to assume the facial expression of its opposite."*

IX. Those demonstrations of emotion which are manifested through the cerebro-spinal nerves, such as clapping of hands in joy, and other physical contortions of the rustic, the swaying of body, wringing of hands in grief, haughty carriage of head, the curling lip, etc., these are more in accord with sympathic than with cerebral phenomena as witnessed by their non-intentional character and by their rhythmic periodicity. Those who would investigate more fully are referred to Man's Moral Nature, by Richard Maurice Bucke, M. D., and other works already cited.

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* How to teach Reading; G. Stanley Hall, p. 27.

X. That the emotions are distinct from the intellect in their physical basis is seen in the character or quality, *intensity*. Intellectual acts, processes, and forms are more or less clear, definite and positive, i. e., they have vividness, but these qualities are not intensive. The emotions vary, not so much in clearness as in intensity. Men are convinced less by "proof" than by emotion, as seen in the simple emotions: love responds to love, hate to hate, faith to faith, fear to fear. These are not subject to the laws of logic.

Having examined the origin and nature of the emotions, and having shown that they operate through the sympathic rather than through the cerebro-spinal system, it will be seen that we are at variance with the earlier notions of ethical training. Mirabeau (1749-1791) wrote "Without intelligence there is no morality." "Through the influence of the laws * * * * exert yourselves, public and private citizens, to diffuse in all quarters the noble fruits of knowledge," and this from ethical considerations, viz., to "prevent the transformation of the peasantry into savage beasts." Tallyrand (1758-1838), "We must learn to infuse ourselves with morality, which is the first need of all constitutions — morality must be taught as a real science, whose principles will be demonstrated to the reason of all men, and to that of all ages."

Condorcet (1743-1794) in his argument that the intellectual impotency of the people is the source of crime states "These vices come from the need of escaping from ennui in moments of leisure, and in escaping from it through sensations and not through ideas."

Restricting our inquiry to the *ethical emotions*, I notice:

That the moral nature is not susceptible of being taught in the sense in which the intellect is taught, or by the same agencies; but it may be developed by processes closely allied. The possible development of the emotions is proved by the study of the various races of men, on the theory that the higher races, i.e., the more differentiated and specialized races, have passed through the preliminary stages of the lower races. Such examination shows an unmistakable increase in love and faith, and a corresponding decrease in their opposites hate and fear.

As intellection differentiates and increases certain kinds of neurine, especially the cortical brain cells, so emotion differentiates and increases its characteristic nerve tissue.

Granting that science has not discovered an exact or satisfactory means or scale for measuring emotion, even to the extent that it has succeeded in precise measurements of intellectual processes, it must be borne in mind that the coincidence of longevity with morality, and of physical development with morality is more than fortuitous. Since the sympathic nerves control the organic functions which insure physical development and longevity, *ceteris paribus*, a well developed emotional activity conduces to these ends, *directly* by natural selection, and *indirectly* because of those social conditions which favor sexual selections, viz., love, beauty, health, etc., and because of the increased fertility and philoprogenitiveness of individuals. These conditions are the physical basis of those social conditions which insure protection and high morals. If the sculptor by projecting his affection into lifeless marble feels the reflex of that affection until he prays the gods to infuse life into the creation of his own hands, nay of his own soul, to the end that the marble may love, and in turn be loved the more, how much more can, aye does, maternal love develop the already inherited love of her offspring. The argument put in another form is, concisely, this: Having developed by association those feelings which induce a normal and healthful nervous system, and having transmitted these physical conditions, it remains to inquire if there are any agencies, social or domestic, which will tend to foster, to perpetuate and to intensify the same. The answer is not far to find. The intensified partisanship of political caucuses is known to all; if there is danger of apathy at an election frequent addresses, harangues, fireworks, anything to arouse emotion is more effective than logic and statistics. The effective power of a brass-band with an active drum-major to carry an election is an example of the same principle. The bravery of the battle field, the zeal of the crusade, the fervor of the camp-meeting are illustrations of the same law.

There is a divine philosophy in the conditions which make such results possible. In these and kindred examples, I think I discover the requisites for developing moral tone in the school. The leader of any emotional demonstration or activity must be himself capable of intense emotion, not feigned, but genuine, deep-seated feeling. His love will be reciprocated by love; and love with faith begets enthusiasm. This is not an act of the intellect. The love of the late lamented Agassiz for his pupils, and his love for his work, the study of nature, blended with the love for pupils was objectified in their reciprocal, so that they came to love the nature in which his soul delighted until their love for nature became an original feeling on their part. This is, at least in part, the explanation of the marvelous enthusiasm which he awakened in his pupils, which has continued to increase and to intensify with each succeeding year. This is why the devotion of his pupils has been so constant, so untiring. No pupil ever thought of convincing himself by formal logic of this great teacher's interest in him or in his work; it was *felt*, not *cognized.* It is the felt love of Spurgeon, Moody, Bishop Taylor and kindred spirits that explains the power of these heralds; it is not their logic and rounded periods.

Let me come directly to the case in hand, for I am already anticipated in my conception, or theory of how to inculcate moral tone in the school. The discussion has already shown that the *study of ethics* must fail to develop this tone, for study is of the intellect, but moral tone is emotion.

To restate my position:

I. The emotions are psychical in nature, not physical.

II. They are the concomitant of all psychic activity.

III. They operate through the sympathic nerves as their physical basis.

IV. They are not taught but are developed.

To apply the foregoing to the school:

I. The teacher to develop moral tone must be sympathetic:

The analysis of sympathy discloses the following elements or factors. The soul innately takes on the psychical form of its environment; the child distorts his features at the will of the person whom he intently beholds; he works his face, his tongue in rhythmic motion with his hand; he weeps, he laughs, he trembles, he is bold, is noisy, is silent, with his surroundings. The outside world acts automatically through the sensorium and excites psychic activity which activity gives form to soul; this intellectual activity, as already shown, is attended by that which is called emotion. If this emotion be projected by the imagination beyond self, and if it be objectified in this relation and be cognized by self as an exciting object (subject-object) and if self be forgotten as the real operating cause there is presented the paradoxical phenomenon of self cognizing self; in which case the cognizing apprehends and comprehends the cognized: these two are one. This feeling of oneness is sympathy. It is the concomitant of the act whereby soul identifies the unity of self nature with another's nature, i. e., "It results from the identification with self of such experiences of others as are recognized to be possible experiences of self." *

Applied, the case in hand stands as follows: The needs of the pupil as an objective reality, if clearly apprehended, automatically give clear, positive, definite form to the teacher's soul; and simultaneously excite the concomitant emotion, each form of activity being attended by its characteristic feeling. If the teacher project his own emotion upon the exciting cause (the pupil), and forgetting self as the real source, cognizes his objectified emotion as coming from this source without self, viz. the pupil, he apprehends self, is one with self, "puts himself in the pupil's place," sympathizes with him. This is not a matter of intellect, although intellection is indispensable as a primal condition.

As the soul acquires ability to 'project self' into others, independent of wealth, culture, social status, race distinctions and other telluric conditions, in brief, acquires ability to project self into universal humanity, it becomes itself universal and attains universal personality. Sympathy then becomes essentially the expression of the psychic unity of humanity. To the extent that soul, through the imagination, relates itself to that which is beyond experience, emotions are awakened beyond those which characterize sensuous experience; they become universal, and when soul attains this, its highest, its crowning activity, sympathy acquires an intensive quality which reaches its limit in universality.

Sympathy with universal humanity is divine.

It may be questioned whether in this exalted sense, sympathy is possible to a low order of intellect.

II. The teacher, to develop moral tone, must love his pupils. The requisites to this end are:

a. A condition of the sympathic nervous system indicated by, and promotive of, robust health and physical vigor.

b. An inherited or acquired psychic form which will respond to the exigencies of the case—he must be able by contemplating the capabilities of soul as related to this particular pupil, to habituate himself to such forms of activity that the emotions spontaneously, rather, automatically, are present. This love will invariably beget response; the intensity of which response will be variable according to the inherited physical and psychical condition of the pupil; but

* Dewey's Psychology, p. 329.

love will invariably meet love. It may be in place to remark that this cannot be feigned. Rousseau has wisely said "Usually the child reads the teacher's mind better than the teacher reads his." *

III. The teacher, to promote moral tone, must love his work.

The teacher who does not like arithmetic has no business to assume charge of the arithmetic class; he who does not like his mother tongue may never hope successfully to teach it; he who does not feel his soul in sympathy with nature, in accord with her movements and ways, may never aspire to teach nature. But

> "To him who in the love of nature holds
> Communion with her visible forms, she speaks
> A varied language."

Recalling the analysis of sympathy just given, we have the following conditions: The pupil's love for the teacher blended with the teacher's love for his work, becomes in the pupil a love for the work, a deep, broad, intense enthusiasm. The teacher's love is his; it has not been taught, it has not been learned, it was contagious; it was felt.

IV. The teacher, to promote moral tone, must love morality. I do not use the term in any special restricted sense, but include in it all that pertains to the elevation of the soul. His feelings must be *one* with morality. It was some such thought as this that prompted Rousseau in his Emile to write "Remember that before you venture undertaking to form a man, you must have made yourself a man."

The teacher who finds companionship with vulgarity and obscenity cannot be said to be in sympathy with high morals. The teacher who finds in his own personal gratification of body or soul a greater attraction than he finds in the well being of his pupils cannot rank high as a promoter of moral tone; his feelings are abnormal, as already explained, and can appeal solely to the abnormal. In brief, the teacher's love must be deep and intense; his faith in God, in humanity, in truth, must be unfaltering. The teacher should be the "high priest of humanity."

Such men have lived, such men are living; such men are to be found in the profession; such men are in demand.

V. The teacher, to promote moral tone, must be imaginative. The strong visualizing power, and hence intense emotional power, of some men is the key to their "magnetism." It may be in order to suggest that the loss of vividness in visualization is one reason why many teachers at sixty have 'less hold' on their pupils than they had at thirty, notwithstanding their ten-fold increase in knowledge.

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* Emile, 89.

The necessity of active imagination is seen also in the fact that repetition tends to diminish the intensity of emotion; the song thrice sung becomes burdensome, the tale thrice told has lost its 'bound,' the joke grows stale, the task becomes irksome, but an active imagination makes new combinations, the strange audience gives re-newed zeal to the play, the new listener re-news the song, new pupils re-new the lesson, and thus with increased knowledge intensified and intensifying feeling is possible. It is not an altogether unkind provision of nature that with increasing years the sluggish imagination fails to keep in vivid outline the dim, receding past with its multiplying emotions.

That this contribution to ethical training may not prove abortive and fail to focalize at any given point, I may be pardoned if I suggest an agency which may be used to elevate moral tone. I must not be understood as inveighing against the present curriculum. Such is not my thought. I am not prepared to recommend the abolition of a single subject from the course of study, but I ask can we make any agency efficient along the lines of *ethical* training as well as intellectual training? and reply

a. Those subjects which appeal to the senses of touch, taste and smell are too sensuous to admit of idealization, hence cannot be made available in ethical training.

b. Much that is addressed to the eye is sensuous, and is only psychical by way of suggestion; in so far as they can be idealized visible objects are relevant, e. g., painting, sculpture, engraving, etc.

c. That which is addressed to the ear is devoid of sensuousness and hence is most readily abstracted and idealized and is, therefore, best adapted to the promotion of moral tone. Inasmuch as music is *par excellence* the language of emotion, is it not the great means at hand for elevating moral tone? Are we not neglecting this most potent agent to effect the result sought? I do not mean that music is the panacea for all irregularities of conduct, far from it, but I am fully persuaded that vocal and instrumental music, especially vocal, may be made the most practical and available means of promoting a high moral tone, and hence I welcome the proposed legislation to provide for the teaching of vocal music in all of the public schools of the state.

I subscribe to the following sentiment of the great English art critic: "Since every work of right art has a tendency to reproduce the ethical state which first developed it, this (music) which of all the arts is most directly ethical in origin, is also the most direct in power of discipline; the first, the simplest, the most effective of all instruments of moral instruction." *

NOTES.

In a very interesting pamphlet issued in January the American Academy of Medicine presents an abstract of the report of a committee on the "Comparative Value of Academical Degrees in our American Colleges." The report tabulated the degrees of 342 institutions of higher instruction out of a possible 434. That 92 institutions are omitted in the tabulation seems unfortunate, but unavoidable. The committee explain that they wrote for catalogues to every institution and when the desired information could not be obtained in this way, addressed a personal letter to the president asking for the information and inclosing a stamped envelope for a reply. When this failed a second letter was sent, and this failing to elicit any response the institution was omitted from the tabulation.

It seems to us that here appears a peculiarity of heads of schools not at all to their credit. We refer to neglect to answer letters written solely in the interest of the teacher's work and not for the personal advantage of the writer. It is a point of pride with many men to answer promptly all letters, and we believe it is considered everywhere a courteous and proper thing to do. The man who neglects it simply lays himself open to the charge of ignoring or violating a rule of good breeding, and is open to criticism only on that score. But the teacher who fails to answer a letter of enquiry from a fellow teacher on a matter of professional interest seems to us lacking in professional spirit as well as common courtesy. We are not ignorant of the demands that are made on teachers in responsible positions, but we know men who never fail to give attention to all such matters promptly, and we believe that a proper feeling towards one's fellow workers is incompatible with habitual carelessness in the matter of correspondence.

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* Ruskin, Queen of the Air. ¶ 42.

The result of all this investigation shows a confusion that is appalling. "In one college a course leads to Ph. B., in another a corresponding course is crowned with B. S., while in a third it is B. L.; while each of the colleges may also use the other degrees for some other purpose." The degree of A. B., which many think still "represents a definite training and has a well-recognized significance," is seen to be reached by such variety of courses as makes it impossible to judge in advance what kind of training, or even how much training, its bearer has had. In the matter of Greek, for example, the minimum amount on which the degree of A. B. can be obtained at the following institutions is expressed in the per cent of time required for it in the four years of college work.

Harvard University	0.
Tulane University of Louisiana	0.
Johns Hopkins University	0.
Bowdoin College	5.7
Wellesley College	6.6
Boston University	8.
Cornell “	9.82
Amherst College	9.84
Williams “	10.3
Brown University	11.3
University of Michigan	12.5
Dartmouth College	13.
University of California	13.1
“ “ Minneapolis	14.14
“ “ Colorado	15.4
De Pauw University, Greencastle, Indiana,	19.1
University of Nebraska	19.5
Iowa College	22.6
Oskaloosa College	23.5

Only a few names are given here, but they were selected at random and they seem to show that the eastern institutions more than the western tend to lessen the amount of required Greek.

The amount of *required* Latin in these colleges varies from 0 to 29 per cent; while the required mathematics varies from 0 to 31 per cent.

We recently read an address delivered last year by President Andrews of Brown University, in which he emphasizes a point which can hardly be too strongly impressed upon teachers in these days when there is so much temptation to forget it. We quote a single passage:

" In another important point recent years have seen a sad falling away from good old educational tradition. I mean that now we do not, so carefully as teachers were formerly wont to do, keep in view the development of the pupil as the great object of education and the main criterion of its success. The latter day college professor is apt to deify his subject. He thinks of it as his great work to expound his theorems, to solve his problems, to teach this or that tongue, to inculcate rules, to represent a science. One cannot condemn this state of mind *in toto*, because no teacher is worthy the name who does not feel death to be his due if he incurs the guilt of ignorance touching his theme. Yet there can be no question that we often give banefully disproportionate prominence to the subjects we are to teach as compared with the characters we ought to build. We come to think of our classes as mere material — fields for the exercise of our powers — while we perfect our knowledge in the departments where we would fain shine as authorities.

" Such a habit has ill effects in many ways. The instructor possessed by it, in the first instance grows apathetic toward dull students, concentrating his attention and pains solely on the brilliant ones, and caring for those, not to make them men, but through their means to extend the boundaries of learning in his darling field. Next and naturally, being absorbed in study and research, he becomes uncritical in exposition and careless about class-room methods in general, insensibly lapsing into the view of such things as in importance secondary to his subjective mastery of the matters he is set to teach. I cannot sufficiently emphasize my conviction that in regard for the true purpose of education our predecessors conceived and practised better than we do.

" Along with this error of ignoring humanity as the end of education, we are, it seems to me, also painfully unfaithful to the humanities as a means of education. In this I fear we are farther astray than we suppose. I am happy to believe that our own College has swerved from the good path less than most others, yet we too feel the chill which afflicts all American institutions of learning on account of distance from the central hearths of culture. Although the bard antedates the book-maker, yet, so soon as the mentality of a new community has become systematic, it assumes the discursive or analytical rather than the literary form. Civilization abounds in logicians and experimenters before it breeds enthusiasts for literature. Mental power precedes mental cultivation. We American educators are further behind than the operation of this law would necessarily place us, having been retarded in a special manner by secular and practical interests. Great pity as it is, we ought perhaps not to wonder that our schools so subordinate letters to grammar and reduce history to annals and chronology."

In the February ACADEMY we took occasion to enter our protest against the proposal to introduce into high schools, stenography and typewriting as studies of more practical value than those usually taught. We have been much interested to find in the last number of the *Stenographer*, a journal devoted to shorthand and typewriting, what we suppose may be considered an expert opinion on the subject by Mr. John Watson, author of an excellent style of shorthand. There is so much good sense in the article that we venture to quote part of it:

"They say that everybody should learn shorthand and learn it at school, the same as longhand. I do not quite agree with either proposition. Shorthand and longhand have not much in common unless it be that they can both be written by the same person and with the same pen and ink. The one, like gold, is for the few; the other, like the nickel, is always ready for the slot and the contribution box. Shorthand, of itself, is no more satisfactory than hoarded gold, until served up in a style of writing or printing so legible that 'he who runs may read.' The value of shorthand is conditioned not merely on the ability of its possessor to write longhand passably well, but to be able to make a satisfactory transcript of ordinary English from the shorthand notes. This necessity of being able to make the transcript eliminates from our calculations as to who should learn shorthand, not only the grossly ignorant but also a very large proportion of those who *go through* our public schools. None know this fact better than teachers of shorthand. I admit that persons of good natural capacity, whether quite young persons, ignorant adults, or those imperfectly taught in public schools, may be taught a phonetic system of shorthand at any time, and be left to acquire a suitable education afterwards, but such a course is against the natural order of things and would always be very uncertain in its results.

"The public schools have all they can do now without the further complication of undertaking to teach shorthand. But I think that, in addition to commercial colleges, distinctively shorthand schools and places of private instruction, there is great need of a shorthand department in what are termed preparatory schools. The great advantage to college students of being able to take verbatim notes has been forcibly brought home to my immediate observation of late years, and the importance of it can hardly be urged too strongly on parents and prospective students.

"The reader is ready to remind me that shorthand is invaluable in many situations where transcripts are uncalled for. Yes, but always to the select few — to those capable of making transcripts. Still, I think, its advantages are sometimes overdrawn by ardent lovers of the art."

THERE has recently appeared a notable piece of work by a Massachusetts school master, Mr. L. L. Dame, principal of the Medford high school. It is entitled *Typical Elms and Other Trees of Massachusetts*. Mr. Dame is already known to botanists by an unusually careful work published some years ago on the Flora of Middlesex County. The present work is less technical and shows its author rather as a tree lover than as a specialist in botany. It is in the form of a handsome quarto, with nearly a hundred pages of text and half as many illustrations, all reproductions of actual photographs, the whole gotten up in excellent style and taste. The photographs were made by Mr. Henry Brooks and are reproduced by the photogelatine process. The Washington Elm at Cambridge appropriately heads the list and the old elm on Boston Common also appears. The other illustrations reproduce some of the finest trees in the Bay state, including maples, pines, buttonwoods, hickories and oaks.

Oliver Wendell Holmes contributes the introduction, very appropriately, as the book really carries out an idea suggested by him thirty-odd years ago in the "Autocrat of the Breakfast Table." As always on such occasions Dr. Holmes is here in happy vein, and it is not a little to the credit of the schoolmaster that Mr. Dame is able to follow with no unseemly break. His opening paragraph is well up to the style of his distinguished sponsor.

"Who that loves trees does not remember how charmingly the Autocrat talked of his big friends; how proud he was of their thews and sinews; how far he would go to feel the biceps of a goodly oak or elm; and how relentlessly he reduced ambitious pretentions by the chilling application of his truthful tape? A wide circle of readers share his appreciation of trees. The finest minds in all ages have admired them, and when the world was young men worshipped them as the abode of gods. Nothing in nature is finer than a tree. Napoleon deflected his great military road over the Simplon to save an ancient cypress; we cut them down to straighten a country street."

Up to the present time copies of the work have been obtainable only by subscription. It can now be procured through any dealer or direct from the publishers, Little, Brown & Co., of Boston.

WITH the March number, *The Forum* enters upon the sixth year of its existence. We are glad to know that the past five years have been a period of uninterrupted prosperity and of steady growth. *The Forum* has deserved well of teachers. Much of its space has been given to the discussion of educational topics, and these discussions have been almost without exception of high grade, serious, temperate, and progressive. They have not all been directly practical in the narrower sense of the word, but they have been exceedingly helpful in calling the attention of the outside world to the work of the men more especially concerned in educational lines, and in developing a proper public sentiment. It is a hopeful sign that a successful magazine of high class has given during five years so much of its space to education broadly considered. We feel, and we know many others feel, a sense of personal gratitude to *The Forum* for what it has done along this line.

THERE have come to us from England, copies of a little monthly journal, *Le Petit Etranger*, intended for the use of families and English schools. The style is pleasant and natural, the matter is good, and each number is readable for its own sake, apart from the aids to French study which are its chief aim. The first part is for beginners, and, besides a short story to be read, suggests some little device for securing the children's interest. The second part is for more advanced students and during last year embodied the selections from French authors with the questions on syntax, etc., required by the Cambridge examinations for 1891. Part third is of general interest beyond the school room, being devoted to extracts from modern French authors, news items, books, etc. Each month offers two prize competitions, for beginners and for advanced students. The journal is entirely in French. Subscriptions will be forwarded by Brentano, 5 Union Square, New York, or it will be sent postpaid from the publisher's office, 95 Colmore Row, Birmingham, England. Price, 4s. 6d. a year.

THE American Institute of Instruction announces for its meeting at Bethlehem, N. H., next July 6—9, some distinctive features. One day will be devoted to "Liberal Education," presented by representatives of Primary, Grammar, Secondary and University grade, and another to "Physical Culture" in its various aspects. It is to be hoped that the attendance will be better than at Saratoga last summer. We were recently told by a Massachusetts man, that the reason why so few went to the meeting in 1890 was that New England teachers did not care for Saratoga. It seems strange to an outsider that the main reliance in securing a good attendance at an educational meeting should be an attractive excursion, but we believe it has come to be a fact in the case of most of the larger associations of teachers throughout the country. In the smaller associations professional spirit seems more potent, and some of these are well attended for their own sake.

THE following composition was recently sent to us by a professor at Ann Arbor, Mich., who vouchesfor its authenticity. It cannot be said to conform strictly to certain conventional rules, but there is in it much food for thought. The writer evidently did not look upon composition writing as a bore or as a task beneath his efforts. There is a whole-souled vigor and earnestness with which he rises to the occasion that makes one very hopeful as to his future.

JACKSON MICH
febth 10. 1871

What is a camels good for. A camels is good for to carrie things acrost the plains. and its hair is good to make garments and it can drink a nuff water to last them several days. What is a aligator good for. A alligator is good for their skin. And you can make boots. And a man can wade in the water. And it will keep them dry. What is a elephant good for A elephant is good for its tusk. and it is good to travel with and it is the largest animale it tis nowne and has large ears and tuft skin. What is a pig good for a pig is good to make headchees and lard and soapgreace and good to pork down and good for pickled tung and pickled feet and it will eat swill and it will root under the fence and eat cabbage and every things it will get a holt of and roots and grunts and squeal What is a dog for. a dog is good to watch the house and its barks and bites growls yels whine and when a trap is set and a rat gets into it a man will let it out and the dog stands their grabs it as it comes out and he will nab its head of and hawked him down. What is a cat good for a cat is good for to hawked on a rat and mice and a cat mews and purs and fight the dogs snaps and growls and scratch. What is a rat good for a rat is good to keep bread and chees and pies and cake and lard and soapgreace and pork and bean and flour. What is a woman good for a woman is good to work and keep house and makes the bead and mix the bread and take care of the baby and feed the chickings and geece and gozling and pigs and cow and boccy and turkie and goblers and ducks and all the fowls in the air.

The Principal of the High School at Adrian, Michigan, has tabulated the following list, showing the occupations of the parents of the pupils in his school. If the Principals of some of the larger high schools and academies would arrange similar data, it might be interesting to compare those gathered from schools in different parts of the country, and such statistics might prove ground for a reply to the question whether our high schools afford education mainly to the children of wealthier parentage at the expense of those whose means compel them to take their children out of school at the end of the grammar school course.

Artists and Painters,	2
Barbers,	1
Blacksmiths,	3
Bookbinders,	1
Book-keepers,	2
Book publishers,	2
Butchers,	1
Cabinetmakers,	3
Carpenters,	6
Clergymen,	1
Contractors,	1
County Officers,	3
Draymen,	2
Druggists,	3
Express Messenger.	1
Farmers,	23
Grocerymen,	2
Harness Makers,	2
Hotel Proprietors,	2
Insurance Men,	2
Laborers,	1
Lawyers,	2
Liverymen,	3
Manufacturers,	13
Masons,	3
Merchants,	3
Merchants' Clerks,	3
Orphans,	2
Piano Tuners,	1
Postal Clerks,	1
Physicians,	6
R. R. Employés,	17
Real Estate Agents,	1
Saloon-keepers,	2
Shippers,	4
Supt. Gas Works,	1
Supt. Public Schools,	1
Traveling Men,	6
Widows,	18

BOOKS RECEIVED.

English Prose; its elements, history, and usage, by John Earle, M. A., Professor of Anglo-Saxon in the University of Oxford. London: Smith, Elder & Co., 1890.

I.

To students of English Professor Earle is already favorably known by his book for Beginners in Anglo-Saxon and by his English Philology. Whatever may be said about these books in the way of criticism of their scientific value, it will not be denied by any one who has read them that they are interesting. Nor even from the scientific point of view can any fault be found with them that deserves to be weighed against the supreme fact that they can be read with pleasure. If the student, in the dilettante stage of his study, has found satisfaction in reading Professor Earle, he is very likely to have derived from this very reading a stimulus to independent research that has promoted him to be a specialist. Hence we esteem Professor Earle very highly as a writer peculiarly adapted to inspire in willing minds that first zeal without which studies that at the outset seem formidable are not likely to be undertaken.

In his latest work Professor Earle continues to deserve well of the student of English. Again he has made a profoundly interesting book. As in his "Philology of the English Tongue," so in his "English Prose," the public he contemplates is not the small one of advanced specialists, but a class of earnest and cultivated students, now very numerous in England and America, who read earlier and later prose with discrimination, and, without being philologists, are yet keenly alive to the signs of growth in language, and have learned to perceive and appreciate differences of diction and style. In short, Professor Earle's latest work is precisely the book to be taken in hand by secondary teachers of English. It will adjust itself at innumerable points to both the thinking and the teaching of every such teacher. We could wish the book were less expensive; but it is indispensable, with all its cost. Suppose one were to deny himself, for a season, the luxury of purchasing works of abstract pedagogy, and so save the wherewithal to acquire this all-important piece of concrete work.

To let Professor Earle speak for himself: — "The general plan of the present work may be briefly described. First, there are four Chapters in which the subject is treated analytically; then five Chapters in which the treatment is synthetic, and progressively so, from divided aspects of Diction in Chapters V. and VI., down to the comprehensive effect of Style in Chapter IX. Thus far it might be called two Books, analytic and synthetic. A third Book traces the historical career of English Prose, following the three great Eras of its development, whence this Book naturally falls into three Chapters, X., XI. and XII. To these three Books are appended a closing chapter of observations calculated to promote the culture and practice of what has been called the Art of the Nineteenth Century."

The first of these thirteen chapters discusses *choice of expression*. The notable feature of this chapter is the emphasis it puts upon the triple character of the English vocabulary. The three main divisions of English words the author designates as "Saxon, Romanic, and Latin." To make this three-fold character of the English word-stock appear more impressively, he devotes no less than thirty pages to the display, in parallel columns, of words related in meaning, but etymologically derived from the three sources above named. This distinction of words according to their pedigree is of course a commonplace of etymology. But Professor Earle expounds the matter from the less usual point of view of the writer in search of the fitting word; and he shows how a study of this compositeness of vocabulary will practically reward the composer of English. Very wholesome is his insistence on the equal value, for purposes of expression, of the words derived from the first two sources, — the Saxon and the Romanic. Other things being equal, a Romanic word is as domestic and familiar to the English race today as a Saxon word. A word that migrated into the language and settled there in the eleventh or twelfth century has, for all practical purposes to us, been an English word from time immemorial. It is in the third column, — the "Latin" one, — that the learned words appear, which are apt to carry connotations of modern bookishness.

In the chapter on the *import of grammar* the author begins with a necessary definition. *Grammar* has come to mean, to the person of average culture, the *art* of using the language correctly. Correct usage, which is really a matter of custom and breeding, is often confounded with science and learning. The "correct" of the schoolmaster is precisely like the "correct" of the tailor, the hatter, and the dancing-master. This "correct" is a matter of fashion, and changes from decade to decade. Scientific laws, of course, do not change. Of these laws schoolmasters have been wont to know and care but little, thinking, perhaps, that in their *rules* they had ultimate and permanent expressions of scientific truth. Of grammar as conceived hitherto by schoolmasters, Professor Earle says: — "It is a set of rules and directions in the conventionalities of the language. The reason why these phrases are bad is only because they are unfashionable; there is nothing deeper in the distinction; even the logical wisdom which rules out the Double Negative is but shallow sophistry. It may be said of some of the best prose ever written that it absolutely swarms with double negatives." And so he "dismisses the notion of conventional propriety as too trivial and narrow a thing for the scope of Grammar."

The author finds, however, in the term *grammar* a sufficient content to fill, as he sets it forth, a chapter of no less than 55 pages. This he does under the subordinate headings, — "the Nature of words and their Employment, or the manner of their Usage."

Then follows a short chapter on "Some Mechanical Appliances," which will be found to be an interesting discussion of *punctuation*, though it by no means undertakes to give the rules for pointing, but rather emphasizes those underlying principles that should enable the writer to punctuate intelligently without having rules in his memory.

In the chapter on the Bearings of Philology the author shows himself altogether friendly towards this modern department of science, — a position which we cordially approve. "The claim to be independent of science, which has been put forward by some of those who speak in the name of Literature, is a claim that cannot be admitted. To stand forth as the teachers of mankind and to decry knowledge; — this seems an untenable position. To deny the need of science to the teacher is to decry knowledge; for science is nothing else but knowledge well-grounded and well-ordered. The Regius Professor of Modern History at Oxford on a memorable public occasion gave utterance to the saying that 'Literature' in the usage of some people, seemed to him to mean 'chatter about Shelley'; — and he was thought to have enriched the language with a new and felicitous apophthegm. But literature of this facile production cannot flourish forever; and in the long run literary men will find it necessary to pay some respect even to philological science."

That which he has to say about Philology Professor Earle arranges under the sub-divisions, — Phonetics, Form-Lore, Etymology, Semantology. Of course the few pages that can be devoted to each of these topics suffice for only the most cursory treatment. Under "Form-Lore" he finds "the most salient and important group of phenomena to be that which surrounds the Strong Verbs"; and he queries "whether the artist in English is not interested in cultivating these and trying to retain what still remains of them." To awaken interest in the obsolescent strong verbs, he presents them in a novel manner. Mingled among the ordinary current forms appear in his table those forms which have fallen out of common use. To contemplate these dead English words may well cause a feeling of regret that vocables so native to our idiom have ceased to sound in human speech. But the feeling is one to which every student of early English must accustom himself, and regrets are unavailing. The most beautiful and expressive speech-forms greet the eye of the student: his ear they can never touch.

What can Professor Earle mean when he says, — "In German literature, the literature which Grimm loved so well, the Preterite of the Strong Verb is absolutely lost to prose"?

In discussing *semantology*, or *semantique*, the author hopes he is on ground where he "may hope to conciliate the belletristic literary man." "For, though I comprise this branch under the head of Philology, it really is not scientific enough to offend anybody." "From the very dawn of literary education it has been the most universal aim alike of teacher and of student to ascertain the variable meanings of words in the standards of literature. The whole pedigree of the Latin Dictionary has been devoted to this, more than to any other end. Johnson was the first to take in hand this task for English. Since his day there has been no great effort of the kind until now in the *New English Dictionary* under the editorship of Dr. Murray."

Greek for Beginners. A Companion Book to the Hadley-Allen Grammar; an introduction to either Coy's First Greek Reader, or the Anabasis of Xenophon. By Edward G. Coy, M. A., Professor of Greek in Phillips Academy. New York: Cincinnati: Chicago: American Book Company.

Ten years ago Professor Coy edited for use in American schools Mayor's "Greek for Beginners," published in England in 1869. In the present work, though following the former along certain lines, the author prefers to acknowledge his indebtedness to Professor Mayor and to assume the responsibility himself. The distinguishing feature of all three of these books is the attempt "to build up a boy's knowledge of Greek upon the foundation of his knowledge of English and Latin," and this certainly is sound pedagogy. The original book was not well adapted to American schools, and in the former edition Professor Coy was hampered, as he has not allowed himself to be in the present. Naturally, then, we find it more satisfactory than either of its predecessors.

The lessons introduce the learner at once to the Hadley-Allen grammar, and consequently are out of question for those who wish a single book during the first term or who prefer another grammar. For those who are willing to begin Greek with both grammar and lessons we think this the best book that has appeared up to the present time.

Matthew Arnold's Sohrab and Rustum, edited by Louise Manning Hodgkins, Wellesley College. Boston and New York: Leach, Shewell, & Sanborn.

An Introduction to the Writings of John Ruskin. By Vida D. Scudder, M. A., Wellesley College. Boston and New York: Leach, Shewell, & Sanborn.

These are the first to come to us of *The Students' Series of English Classics* which Messrs. Leach, Shewell, and Sanborn have announced as "now ready, in press, or to be published during 1890." They indicate, we suppose, the general form and style of the series. The typography, presswork and paper are as good as could be desired. The size of the page and of the book is convenient and well adapted to the purpose. The binding would be improved in appearance by a title on the back. All that the publishers could reasonably do has been well done.

The same praise can hardly be given to both the editors. Miss Hodgkins is presumably a teacher of English. Certainly an edition intended to furnish special preparation in English for college work ought to be a model in itself. For many years we have been accustomed to hear the secondary schools criticized by the college authorities for their bad work in English. Naturally, therefore, when a college professor takes pen in hand we expect something better, as far as style is concerned, than would come from a high school teacher. We are not criticizing the *matter* presented by

Miss Hodgkins, but the awkward use of "is instanced" and "is evidenced" on her first page set the key of the whole performance. The use of the word "rhetoricals" on this same page completely mystifies us as to her meaning, and we get no help from the ordinary dictionary. "Transpire" in the sense of happen, and the relative "whose," referring to a neuter antecedent, are among the questionable usages adopted in the first two pages of the book. "The duty to fashion it symmetrically" (p. 23), "epical" (p. 21), and the pronoun "he" and "his" (p. 16), in two successive sentences referring to different antecedents, are things which the ordinary teacher would underscore in a schoolboy's composition.

Miss Scudder's work is much better done, in fact, if it were not for one or two slips, we should have said it was as good as could be desired. Her ideas are excellent and the literary quality of her introduction is exceptional. Still we can but notice such sentences as the following on page 19: "Now the evangelicals were in theory ascetics. Their peculiar form of faith derived obviously from the Methodists, who had been, as a rule, unlettered people, indifferent to fineness or art; by more indirect and subtle means it continued in many respects the old Puritan traditions of England." We should question one statement, page 21, "Poets and their ideas have to be translated into prose before we can be sure of their general or permanent effects." Is this true of Homer or Shakespeare or Chaucer?

Materials for French Composition. By C. H. Grandgent, Director of Modern Languages in the Boston Public Schools, formerly Tutor in Modern Languages in Harvard University. Part I. Exercises based on L'Abbé Constantin. For pupils in their second or third year's study of French. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1890.

This little book is one of the happiest thoughts that we have seen in some time. The author is a practical teacher and his method is, we believe, the only practical one for teaching French Composition after a pupil has finished the purely grammatical exercises that usually come in the first year. It is absurd to expect pupils in ordinary secondary schools to turn ordinary English prose into decent French or German. But there is nothing unreasonable in expecting them to turn back into passable French or German a paraphrase or modification of a fairly simple paragraph which they have studied. The fact that the author calls this little book part first, leads us to hope that he will continue the series, with exercises based on other authors. In his preface he promises similar exercises, which we suppose will be still simpler, based on Ventura's *Peppino*, and Super's *French Reader*.

Schiller: *Der Geisterseher.* Aus den Memoires des Grafen von D * * * Erstes Buch. Edited with introduction and notes by Edward S. Joynes, M. A., Professor in South Carolina University; editor of Joynes-Meissner German Grammar, German Reader for Beginners, etc. Boston: D. C. Heath & Co., Publishers. 1890.

German teachers are to be congratulated that the first American edition of *Der Geisterseher*, comes from so good a hand and so clear a head. The editor is possessed of a power of self restraint which in these days of voluminous editions is really refreshing. He gives us a simple page of preface and less than four of introduction, and we are already in direct contact with the author. This seems to us an ideal method of bringing students into relation with literature. Of course it gives an editor little opportunity to show his learning or appeal to his peers, but really it sometimes seems that it might be a good thing to have some competent authority settle and advertise the qualifications of scholars so that it would not be necessary for the maker of text-books which must necessarily be elementary to parade his learning in order to advertise himself as a scholar. It is not half so hard to acquire a little special knowledge on some subject as it is to forget at times that one has the knowledge.

Der Fluch der Schœnheit. Novelle von W. H. Riehl. Edited for the use of schools by Calvin Thomas, Professor of Germanic Languages and Literatures in the University of Michigan. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

Der Fluch der Schönheit, as readers of The Academy will remember, has been recommended by the New England Association of Colleges and Preparatory Schools. It is here presented in cheap form, well printed and on good paper.

Macaulay's Second Essay on the Earl of Chatham. Edited by W. W. Curtis, A. M. Principal of the High School, Pawtucket, R. I. Boston and New York: Leach, Shewell and Sanborn.

This is the third number of *The Students' Series of English Classics*, the first two of which we notice in The Academy for this month. There is here a very brief preface, a chronology of the life of Macaulay and of Pitt, a couple of short quotations from Bancroft and Green, and then the essay is left to speak for itself. There is, we think, no better way in which to let the pupil come in contact with literature. At the end of the book there are twenty pages of notes, but the text is not disfigured by numbers referring to them, they do not materially increase the size or cost of the book, and the teacher who wishes to ignore them can easily do so. Meanwhile they are there and can be used by those who feel the need of such helps.

A Shorter History of the United States for Schools, with an Introductory History of the Discovery and English Colonization of North America, with Maps, Plans, and References to Supplementary Reading. By Alexander Johnston, Professor in Princeton College. New York: Henry Holt & Company, 1890.

From the Publishers' Note we learn that the text of this work was completed almost in its present form by Professor Johnston, and that the maps have been prepared and the book printed under the supervision of Mr. Butler of Lawrenceville School. Personal acquaintance with Professor Johnston and profound admiration for his work raised our expectations high with reference to this book. We confess some disappointment, which we express with more reluctance as the book could not receive the final touches which an author often wishes to give when the printed page lies before him. Not that the book is not superior to the ordinary text-book, but that it fails to reach the excellence of the author's former work.

Fact and Theory Papers. *The Time-Relations of Mental Phenomena.* By Joseph Jastrow, Professor of Psychology at the University of Wisconsin. New York: N. D. C. Hodges, Publisher, 47 Lafayette Place. 1890.

We have found this little book of sixty pages fascinating reading although it can hardly be called light. The style is rather condensed, but clear, and the author is definite and helpful. He has the advantage of being a specialist of reputation so that one feels a degree of confidence in following him.

Common Sense Exercises in Geography. "Teacher's Help Manual" Series.—No. IX. By Seymour Eaton. Boston: New England Publishing Co. 50 pp. 9 x 6. Price, 25 cents.

Language Work Below the High School. Adapted from the German by

Chas. De Garmo, Ph. D. (Halle), Professor of Modern Languages in Illinois State Normal Univerisity, Normal, Illinois. Bloomington, Ill.: Public-School Publishing Co. 1889.

Recreation Queries in United States History. By C. L. Gruber. Boston: New England Publishing Co. 136 pp., 7 1-2 x 5. Price, 75 cents.

Geographical News of the Year. By Gilman C. Fisher. Boston: New England Publishing Co. 34 pp. Price, 20 cents.

Recreation Queries in United States History. With answers. By C. L. Gruber, M. E. Boston and Chicago: New England Publishing Co.

Sadler's Practical Arithmetic for use in High Schools, Academies, and the higher classes in Grammar Schools by W. H. Sadler and W. R. Will. First Edition. Baltimore, Md.: Sadler Publishing Company. 10 and 12 N. Charles Street. 1891.

Elliptic Functions. An Elementary Text-book for Students of Mathematics. By Arthur E. Baker, C. E., Ph. D., Professor of Mathematics in the Stevens School of the Stevens Institute of Technology, Hoboken, N. J. New York: John Wiley and Sons. 53 East Tenth Street. 1890.

A Primer of Pedagogy by Daniel Putnam, teacher of Pedagogy in the Michigan State Normal School. H. R. Pattengill, Publisher, Lansing, Mich.

Abeille. Par Anatole France. Edited by Chas. P. LeBon, Junior-Master, English High School, Boston. Boston: D. C. Heath & Co., Publishers. 1890.

Heath's Modern Language Series. *Laurette ou Le Cachet Rouge* par Alfred de Vigny, Edited with an Introduction and Notes by Alcée Fortier, Professor of the French Language and Literature in Tulane University of Louisiana. Boston, Mass., U. S. A.: D. C. Heath & Co., Publishers. 1890.

The High School German Grammar with Appendices, Exercises in Composition, and Vocabularies. By W. H. Van Der Smissen, M. A., Lecturer on German, University College, Toronto, and W. H. Fraser, B. A., Lecturer on Italian and Spanish, University College, Toronto. Late French and German Master, Upper Canada College. New York: D. Appleton & Company. 1888.

Appletons' Classical Series. *The Satires of Juvenal,* edited by Thomas B. Lindsay, Ph. D., Boston University. New York, Cincinnati, Chicago: American Book Company. From the Press of D. Appleton & Company.

College Algebra. By Webster Wells, S. B., Associate Professor of Mathematics in the Massachusetts Institute of Technology. Boston and New York: Leach, Shewell & Sanborn.

The Natural Speller and Word Book. New York, Cincinnati, Chicago: American Book Company.

Johns Hopkins University Studies in Historical and Political Science. Herbert B. Adams, Editor. Eighth Series XI-XII. *Seminary Notes on Recent Historical Literature.* By Dr. H. B. Adams, Dr. J. M. Vincent, Dr. W. B. Scaife, and others. Baltimore: The Johns Hopkins Press.

Riverside Second Reader. *Fables and Folk Stories.* By Horace E. Scudder. In two parts. Houghton, Mifflin and Company. Boston: 4 Park Street; New York: 11 East 17th Street. The Riverside Press, Cambridge.

Elementary Science Manuals. *Practical Plane and Solid Geometry,* Including Graphic Arithmetic, by I. H. Morris, Author of "Geometrical Drawing." London: Longmans, Green and Co., and New York: 15 East 16th Street. 1890.

Longmans' French Course. Complete Edition with copious exercises and vocabularies. By T. H. Bertenshaw, B. A., B. Mus., Assistant-Master in the City of London School. London: Longmans, Green & Co., and New York: 15 East 16th Street. 1890.

The First Book in Color, being a complete Practicable Theory and Method of Color Construction as color appears materially. By Stephen W. Tilton. Boston: Published by the Author. 1889.

The Reproduction of Geographical Forms. I. Sand- and clay-modelling with respect to geographical forms. II. Map-drawing and map-projection. By Jacques W. Redway. Boston: Published by D. C. Heath & Co. 1890.

Notes on Trigonometry and Logarithms by the Rev. J. M. Eustace, M. A., St. John's College, Cambridge, Assistant Master at the United Services College, Westward Ho. London: Longmans, Green & Co., and New York: 15 East 16th street. 1890.

Elementary Geology by Charles Bird, B. A., F. G. S., Headmaster of the Rochester Mathematical School. London: Longmans, Green & Co., and New York: 15 East 16th street. 1890. All rights reserved.

THE ACADEMY:

A JOURNAL OF SECONDARY EDUCATION

DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND ACADEMIC DEPARTMENTS

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A GERMAN UNIVERSITY.

T. B. BRONSON, MICHIGAN MILITARY ACADEMY.

WITH nearly seven thousand students and over three hundred instructors the University of Berlin is now the largest in Europe, Vienna alone being its rival in numbers. It was founded but eighty years ago, in 1809, and a former palace situated in Unter den Linden, directly opposite the palace of Emperor William I., was given for its use. The building is not a credit to the institution it represents. But the fame of German universities has proved that the intellectual part, not the material, makes the university. While immense and costly barracks are rising continually in Berlin, the old structure called the Royal Frederick William University still shelters its thousands of students and its learned professors. The exterior has been kept in a presentable state, that it might not ruin the appearance of the finest street in Berlin. But within, the rooms are dingy and dreary, and many so dark that gas must be burned by day. The walls are bare, stained, and broken. There is no ventilation; not even the windows are opened. The seats are mostly of the primitive country school-house style, long pine benches with desks in front, and so close together that it is impossible for one person to pass another who is seated. Consequently, during the ten minutes preceding a lecture, the spectacle presented somewhat resembles "leap-frog," as the students spring over and run about upon the benches to reach their places.

The first thing after matriculation is to consult the bulletin boards, and to find out when and where are to be given the lectures one intends to hear. Each professor has a notice posted, giving date, room, and course. As the lectures do not begin until nearly two weeks after the official opening of the semester, one has sufficient time to decipher the hieroglyphic announcements of the professors. Perhaps half of the students do not know at the beginning of a semester what they wish to elect, and since they are allowed six weeks from the opening in which to decide, those in doubt have the custom of hearing different lecturers each day, and of selecting finally the professors they like best.

The authorities are very lenient respecting the number of courses that may be taken, and attendance upon them. One may elect as many as he wishes. The only restriction is that one shall take at least two hours a week. As to attendance, the student may go or remain away at pleasure. To receive credit for a course all that is necessary is to obtain the professor's signature in the election book at the beginning of the semester, and again within two weeks of the close. The credit may thus be obtained by attending only two lectures during the semester. Only one degree is given in the literary department, that of Doctor of Philosophy. A German student is not admitted to examination for a degree until after three years' university attendance. He may spend the three years at the same university, or at different ones. Many students remain four, even five years, and in all this time there is no examination, or quiz, nothing until one is prepared to try the examination for a degree.

The lecture system is more fully developed in the German university than in ours, and has there, on account of the maturity of the students, the best opportunity for successful operation. The subject matter of the lectures is entirely scientific. The modern languages, for example, are treated as a science, and not for the practical part of speaking and of understanding when spoken. There are secondary courses under an instructor, in which one may obtain some practical work, but these courses have little weight in the examination for a degree. One may be able to speak fluently and to understand all the modern languages of Europe, and it would benefit one little in taking a degree. It is far more important to understand Gothic, and to be able to give the changes of a vowel or consonant through the Middle Ages. Nearly all the courses presuppose a knowledge of Latin, for Latin is often quoted by the lecturer, and frequently without translation.

Many of the regulations regarding the conduct of students are a dead letter. Absence from the city is forbidden, but a student may elect his courses, go to Rome to spend the winter, return in March and receive credit for his semester's work, and no one be the wiser.

Dueling is strictly prohibited; even as spectator one is subject to discipline. But the authorities of the university seldom trouble themselves about it. Dueling is less common at Berlin than at the smaller universities. The honor of having one's face disfigured is not so highly esteemed there, and most of those who wear the scars received them elsewhere. One is wholly unable to comprehend how a handsome young fellow can be so foolish as deliberately to seek another man to cut these terrible gashes in a smooth and rosy cheek. Yet dueling plays an important rôle in student life. It is no sport for those who engage, for never do both parties come off unscathed as often in the French duel. This is a specialty of the student, and though it occurs sometimes in the army, it is almost unknown in civil life.

Most common among students is the duel with the *Schläger*. This is a sword with a blade about three feet long, blunt on the end, and sharpened for ten or twelve inches from the point. Certain societies, called corps, or fighting corps, require each member to go at least once upon the *Mensur*, as the dueling ground is called. Challenges are given upon the slightest provocation. If in a crowd one student jostles another, the one offended presents his card with the words, "Twenty minutes with the *Schläger*!" If one student pushes another's dog out of the way, the offender is immediately challenged by the owner. One of the most approved methods of arranging duels is by appointment. One society makes appointments for its freshmen to fight members of another corps. This is for no insult, no reason whatever, excepting that all members must fight. Men who always have been the best of friends sometimes come together under this arrangement to slash each other's faces.

The contestants have the neck, stomach, and thighs protected by thick leather pads, doubled and stuffed with pieces of leather. A heavy glove is drawn on, and the right arm is wound with tough cloth until it is a foot in diameter. The hilt has a guard of steel and heavy iron so made as to prevent injury to the hand. A pair of leather spectacles with cotton back is placed upon the eyes, and grease smeared above the eyebrows to turn from the eyes the blood which is to flow. Upon the leather spectacles is placed a pair of iron ones with hollow cylinders. The left hand is held behind and is unprotected. The movements are from the wrist and elbow, and in the hands of an expert the *Schläger* describes wonderful curves. The scars received in these encounters are called *Schmisse*, and the owner is as proud of each as he would be of a gold medal. Terrible blows are given. Eyebrows and temples are hacked, the cheek is sliced sometimes an inch and a half vertically, pieces of the scalp are clipped out, and the nose cut with a gash so deep that the cheek is entered on both sides. Student physicians always are in attendance; they doctor the wounds with the latest science, and sew them up with skill.

This custom of dueling has come down from the barbarous ages, but it is clung to with great devotion. The strange plea offered by its adherents in its defense is that it is their only means of training their men to manliness, self-reliance, and bravery, and of keeping cowards out of their fraternities. Senators and representatives, professors, fathers and mothers may declaim against it, but no steps have been taken sufficiently severe to check its practice.

Beer-drinking is an old German custom and an authorized characteristic especially of the German student. They accomplish something enormous in this respect, and in general the fault is mildly criticised. There is a verse in German poetry which runs thus:—

"Das Schoenste sind die Frauen,
Das Suesseste der Wein,
Das Staerkste ist das Hauen —
Fest haltet an den drei'n."

The most beautiful thing is woman,
The sweetest is wine,
The bravest is fighting —
Hold fast to these three.

The German student clings to them.

Appointments of teachers and of other officials at the university, as in all government positions, are permanent, and, if worthy, one is sure of promotion. Salaries vary greatly. Instructors and assistant professors receive no fixed salary from the university. They have for their income the fees paid by the students who elect their courses. Full professors receive a fixed salary from the university, and, in addition, the fees paid by the students under their instruction. The fixed salaries vary from five hundred dollars to eight thousand. The fees paid professors by students often amount to two or three times the regular salary. A Rector, or President, is chosen annually from the number of professors. He represents the university on state occasions, and receives a large addition to his regular salary.

An instructor at a university has but one or two hours' lectures a day, and only seven months' work in the year. This affords time for his private investigation, and the German professor improves his opportunities, often studying from fourteen to sixteen hours a day.

As a rule the German professor is rough and eccentric in manner. He is without ease and polish in society, and atones for this defect by hearty cordiality or by silence. Every professor is an authority on the subject in which he instructs. He delves to the bottom, and what he has not, either in his head or in his notes, is of little importance. Like the whole nation he is slow, but in time he accomplishes his task. Outside of his line, in life, in business, and in branches of study not connected with his own, he knows comparatively nothing. The professor's wife is usually the head of the family. She carries the purse, does the business, takes care of the bank account and securities, makes all the purchases for the household, and often buys her husband's clothing, even his hats and shoes. This leaves the professor untrammeled by the world, and free to devote himself to his specialty.

Some professors lecture with few notes; others are closely tied to them. Rarely have they a good delivery. One shouts his lectures, another reads in so low a tone and so rapidly that he is understood with great difficulty. One sits, one stands, one lectures half sitting and half standing, another walks the floor. When they sit they are as likely to turn their backs as to face the audience. I heard one professor who sat sidewise with his face turned two-thirds from the audience, and not once, before commencing, or during, or after the lecture, did he look towards his hearers. It has happened that a professor has taken his seat, and even lectured for half an hour, before noticing that there was no one besides himself in the room.

Fifteen minutes is allowed between lectures for students to change rooms and become seated. After all are in their places, the professor rushes in and begins to lecture. Many times he begins when scarcely on the threshold. At the close he flies out in the same manner, and goes like a shot until he is out of sight around a corner.

I remember one of the best and most popular lecturers in Germany. His language was beautiful, his periods were well rounded, his diction was perfect. As he came into the room where two hundred or more students awaited him, they applauded. He seated himself, fixed his eye upon some imaginary spot in the ceiling, and lectured for an hour without letting his voice fall or observing a rhetorical or other pause. He passed over periods as if there were none, and when he chanced to pause for want of breath, it was always in the middle of a sentence and between words most closely connected.

Although the German university has its defects, it has produced many of the greatest scholars and thinkers of modern times. In the past the University of Berlin has enjoyed the fame of the philosophers Fichte, Hegel, Schelling, and Schleiermacher, the jurist Savigny, the Grimm brothers, the scientist Ehrenberg, the historians Raumer and Ranke, the geographer Ritter, and the physician Langenbeck. Today it boasts of Leyden, Bergmann, and Koch in the medical faculty, Helmholz and Hofmann in physics and chemistry, Du Bois-Reymond in physiology, Virchow in pathology, Gneist, Brunner, and Beseler in jurisprudence, Zeller in philosophy, the geographer Kiepert, and the historians Curtius and Mommsen.

RECENT LEGISLATION UPON COMPULSORY EDUCATION IN ILLINOIS AND WISCONSIN.[1]

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THE attempts that have been made to secure the enactment of laws in these two states for the purpose of bringing all children into the schools, public or private, have excited an unusual degree of attention. Indeed a stronger statement may be made. These attempts have created a degree of excitement seldom paralleled. It is fair to say that in both states violent prejudices have been aroused. Measures which were devised for the best purposes, and which received the almost unanimous support of the legislature to which they were submitted, have been denounced as intended to subvert the liberty of the citizen. An event so peculiar is certainly worthy of study. A careful examination of the case will bring to light some of the peculiarities of our American civilization. It will illustrate some of the political methods which it is hoped the extension of education may finally bring to an end. Such examination will also show undoubtedly, the necessity of a unifying energy in our system of education, — an energy that will harmonize into one grand, intelligent, patriotic, and virtuous nation, the millions of separate and discordant peoples with which the land is now filled.

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[1] A portion of the paper read before the Department of Superintendence at Philadelphia, Feb. 24, 1891.

In Illinois the necessity for a compulsory education law has long been felt. In his biennial report for the years 1871–2, Dr. Newton Bateman, then superintendent of public instruction, urged upon the legislature the necessity of a law compelling the attendance of children upon school, where such compulsion was necessary to secure them a reasonable education. He treated the matter under the head of The Educational Rights of Children. The superintendent assumed that where the child is not sent to school the child himself is the chief loser, — the principal thing to be thought of is the securing of his rights. This is an eminently just view of the case.

But the legislature did not at once respond to Dr. Bateman's recommendation. It was not until ten years after this recommendation was made that the subject was positively acted upon. In 1883 a law was passed for the purpose named, but it had been carefully drawn in such way as to offend no one. The consequence was that almost no good was accomplished by it. There is no record of any case in which it was enforced so as to secure the attendance of a single child upon school. To the educational men it became apparent that the law had no worth. It was a dead letter upon the statute book.

But in the year 1889 another law was passed of a very different character. It has the energy of an effective vitality. It provides that "Every person having under his control a child between the ages of seven and fourteen years, shall annually cause such child to attend for at least sixteen weeks, at least eight weeks of which attendance shall be consecutive, some public day school in the city, town or district in which he resides, which time shall commence with the beginning of the first term of the school year, or as soon thereafter as due notice shall be served upon the person having such control of his duty under this act." Proper penalties are provided for every neglect of such duty, consisting of a fine of not less than than one, or more than twenty dollars, and the guilty party is to stand committed until such fine and costs of suit are paid. But the person so neglecting may show to the satisfaction of the board of education or of directors, that the child has attended for a like period of time a private day school approved by the board of education or of directors of the city, town or district in which such child resides; or that instruction has otherwise been given such child for a like period of time in the branches commonly taught in the public school; or that he has already acquired the branches of learning taught in the public schools; or that his physical or mental condition, as declared by a competent physician, is such as to make his attendance upon school inexpedient, and in that case such penalties shall not be incurred. No school shall be regarded as a school under this act unless there shall be taught therein in the English language, reading, writing, arithmetic, history of the United States and geography.

The law also provides for the appointment by the board of education or of directors, of a truant officer or officers, whose duty it shall be to inquire concerning all supposed violations of the law, and to enter complaint against all persons who shall appear to be guilty of such violations. It is also the duty of the truant officer to arrest children of a school-going age who habitually haunt public places and have no lawful occupation, and also truant children who absent themselves from school without leave, and to place them in charge of the teacher having charge of the public school which such children are by law entitled to attend.

In the legislature, the law was carefully considered and was entirely devoid of all partisan characteristics. Members of both the prominent political parties gave it their hearty support in the belief that in thus doing they were rendering the state a noble service. Indeed, to all reasonable persons, the necessity for such a law was apparent. From the school statistics for the year 1888, it is reasonable to infer that there must have been in the State of Illinois, 134,000 persons under sixteen years of age and above six, who were not attending school of any sort, public or private. The total number enrolled in the public schools for that year was 751,349, and in the private schools of the state, 100,465. The number of non-attendants was too large a fraction of the total number for the safety of the state and for the good of the people.

Certain general considerations undoubtedly had their effect upon the minds of the legislators. The fact that laws compelling the attendance of children at school have been enacted and are now in force among the most enlightened and freest nations of the earth; the obvious fact that in a republic nothing is more dangerous than ignorance in the populace; the demand of justice, that if a man is taxed without his own consent for the support of schools for the avowed purpose of securing the universal intelligence of the people, he has a right to demand that the purpose of such taxation shall be carried out; these and other similar considerations undoubtedly influenced the minds of the members of both houses. The result was that when the final vote came to be taken the measure encountered in the senate not one opponent; and in the house, of 153 members, there were but six votes against it.

The Bennett Law was prepared by Robert Luscum, assistant city attorney of Milwaukee, at the request of a committee appointed by a German school society. I think Mr. Luscum was familiar with the action of the Schoolmasters' Club in Illinois, and was guided, in the preparation of his bill by the one introduced in the legislature of that state. The bill was introduced in the assembly of the Wisconsin legislature, by Hon. Michael Bennett, an Irish Catholic, chairman of the committee on education. It did not receive much consideratian, except by the committees on education, and there is no record that there was a vote against it in either branch.

And what has been the result of the operation of these laws thus far? I speak more especially for Illinois as being better acquainted with the facts in that state. In the city of Chicago during the year ending July, 1890, 10,000 children, or thereabouts, were taken from the streets during the school months and placed in the schools. In other parts of the state, similar results were attained. Briefly it may be said that the number of children thus gathered into the schools of the towns and country districts of the state, outside of Chicago, is equal to those reported in that city. And it ought not to be forgotten that this large gain to the schools was accomplished without friction, and with almost no employment of force. In Chicago, in Springfield, and in other cities we learn that there have been no prosecutions.

Another fact is worth reciting here. Of the 10,000 children placed in the schools in Chicago, 1,500 were placed in private or parochial schools. Similar results are known to have followed in other parts of the state, but the record of them has not been so accurately kept. This has been in exact accord with the spirit of the law. It was not intended to be hurtful to the private or parochial schools. Its object was to promote education, to secure to children their dearest and most valuable rights.

But the subject may be regarded from another standpoint. Taking the statistics of the entire state, we have a gain in the enrollment in the public schools for the year ending June, 1890, over the preceding year, of 16,454. The private schools for the same time show a gain of 6,729 over the previous year. For the year 1888 to 1889, the gain in the public school enrollment was 4,410; and in the private schools, for the same time, there was an absolute loss. The record of attendance shows a still more marked improvement than that of enrollment. In the year ending June, 1889, the number of days of attendance on the public schools by pupils in this state was 80,041,817. In the year closing in June, 1890, the total number of days of attendance reached 84,659,664, or a gain of more than 4,600,000 of days of attendance during the last year over the preceding. The gain of 1889 over 1888 amounted to only 600,000 school days. The gain of 1890 over 1889 was, therefore, more than seven times as great as that of the preceding year, and only the compulsory education law can account for the difference.

It ought not to be forgotten that all this good was accomplished in the face of constant and irritating opposition. No effort was spared by the enemies of the law to make it odious in the eyes of the people. Eminent lawyers were employed, wherever a prosecution was begun, to denounce the law and to defend the parties prosecuted. There seemed to be no sparing of expense in carrying on these operations. And yet, notwithstanding all this hostility, the magnificent results already named were achieved.

We have enumerated some of the pleasant and encouraging results as viewed from one standpoint. But the enactment of the law, as already intimated, was followed by another class of consequences. A few of the managers of parochial schools were disturbed at the prospect of being required to teach English in their institutions. Soon after the passage of the law, certain Lutheran ministers connected with the Missouri Synod, so called, began to criticise it, and they kept up their work assiduously. Certain politicians, being very desirous of gaining an ascendency in the state, saw in this their opportunity. They immediately began to encourage the Lutheran malcontents to persist in their criticisms. Many Lutherans were disposed to take a reasonable view of the matter, but the politicians, and the more unreasonable among their own number, would not permit them to remain neutral. The agitation was at first carried on mostly under cover. The general public, for a time, knew very little of it. An eminent democratic leader advised against making the repeal of the law a plank in the state platform, but urged the party to utilize the opposition to it wherever they could in different localities. In this way a perfectly organized system was developed and was put into vigorous operation.

In the mean time, the republican party was disinclined to take up the school issue, and its state platform on the subject was of the milk and water type. The campaign was under the management of a man whose contempt for schools and literary people is only exceeded by their contempt for him. This man regarded the office of state superintendent only as a thing to trade upon. For the sake of securing votes for members of the legislature, he gave it to be distinctly understood that he was willing to sacrifice the candidate for the state superintendency. He directed the republican orators not to refer to the compulsory education law in their speeches. But, as the months rolled on, the strength of the opposition became more and more manifest, and some slight effort was made to support the law. The superintendent of public instruction of the State of New York, Judge Draper, delivered, at Peoria, a convincing and inspiring address in support of the law. The Schoolmasters' Club, and other educational associations, spoke out in ringing tones upon the subject, and for the last three weeks of the campaign, there was something done on the political arena in behalf of the schools. But these efforts were represented as the mere makeshifts of a party reduced to extremities, and thousands upon thousands of the good citizens of the state were made to believe that there was no danger to the free school system or the compulsory education law. The opponents of the law kept up their movements vigorously. On the Sunday preceding the election, violent addresses were made in all the German Lutheran churches as well as in some of the German Catholic churches, and the preachers with large numbers of their congregations, were detailed to act as ticket peddlers at the polls. In these pulpit harangues the simple minded people were made to believe that the law menaced their personal liberty, — that the effect of it would be to make their further residence in America intolerable. From the political platform also the most absurd appeals were made. Demagogues, who cared for neither God nor religion, declared that this measure would make it impossible for the people to worship according to their inherited faith. Every possible influence was brought to bear to secure votes. Candidates for the legislature were secretly pledged against the law.

Soon after the publication of the law in Wisconsin, the German Lutheran Synod passed resolutions condemning it, and pledging the Lutheran church to an uncompromised repeal of it. Soon after the action by the German Lutherans, there appeared the manifesto of the three German Catholic prelates of the state. Subsequent to this, there was a meeting of the German Catholic societies, which not only passed resolutions demanding the repeal of the law, but denounced Governor Hoard as an enemy of the church schools and German customs. The next organized attack upon the law came from a joint meeting of German Lutherans and German Catholics, with a sprinkling of devout democratic politicians. The results of the election indicate, very clearly, that both the German Lutheran and the German Catholic churches of the state worked and voted almost to a man in support of the democratic ticket.

The great political revolution which appears to have swept over the whole country also had its effect in the same direction in both these states. These causes operating together produced the result. Governor Hoard in Wisconsin and Dr. Edwards in Illinois were defeated. They were noble conscientious men. They were men who had the courage of their convictions. Each could have been elected by a large majority had he been willing to betray the right of the state, or sacrifice the right of the child to an education in the English language. Each preferred defeat to such a betrayal of interests committed to his care. But this result ought not to be taken as the expression of the enlightened public sentiment of the state. Thousands of persons were deceived into the belief that their personal liberty was threatened by the law, a suggestion for which there was not a shadow of foundation. If the law compelled the children to learn certain dogmas, to accept certain beliefs, whether in religion or politics or social science, it might be reasonably objected to as restricting the liberty of the individual. But the compulsion is not of this kind. The compulsory education law merely compels the recognition of the rights of children to an amount of intelligence that will enable them to make useful and successful citizens, to secure their own happiness and to do good in the world. The compulsion that dictates the belief of a man is a trammel upon his mental freedom; but the compulsion that prevents one human being from keeping another human being in ignorance, really promotes an enlargement of individual liberty. If these laws could be executed in a right spirit the amount of individual freedom in these states would be immensely enlarged by their agency.

Thousands of well meaning persons, as already stated, believed that there was really no danger, either to the school system or the compulsory law. The parties hostile to the law were intensely and furiously active. Most of its friends, trusting to the inherent justice of their cause, put forth little effort. There are not wanting indications that if the same question could have been voted upon again as soon as the result of the 4th of November became known, that result would have been emphatically reversed.

One of the lamentable results of the opposition to the law is that for the time being its moral influence is diminished. Whatever legislation may be enacted, it will require strong and vigorous effort on the part of the friends of free schools to restore to these institutions their full measure of beneficent influence.

There is, however, inspiration in the thought that the public sentiment among educational men remains loyal to the great principle of the right of every child to an education. At the meeting of the State Teachers' Association held in December, 1890, the largest and most enthusiastic ever held in the state, no sentiment uttered by any of the speakers elicited a tithe of the applause that followed every approving reference to the compulsory education law. Bishop Spaulding, in the course of his masterly address, expressed his approval of it, and the vast audience, filling every square foot of the great Hall of Representatives, broke forth into tumultuous and long-continued cheering. Near the close of the meeting, the following out-spoken resolution was adopted with entire unanimity: —

"RESOLVED, That the law concerning the education of children, known as the compulsory education law, which went into effect July 1, 1889, was a measure calculated to promote intelligence, humanity and personal liberty; that such a measure is necessary to protect the free institutions of this country against the the assaults of demagogues and dogmatists; that its purpose was to increase the amount of intelligence and personal independence among our people; that the effects produced by its enactment and right enforcement have been in a high degree salutary; that the rate of increase in attendance in our schools since its enactment, compared with former years, has been more than doubled; that the abuses that have risen under it have been very light compared with those arising under almost any other law, and that the law, therefore, ought not to be repealed or so amended as to lessen its efficiency."

What the final action of the legislature upon the subject will be, it is impossible at this writing to determine. Undoubtedly a strong effort will be made for a complete repeal, but it is safe to say that such a proposition will not prevail. The friends of the law in the legislature are very resolute. It is hoped that they will be able to prevent any serious impairment of the efficacy of the statute. The danger is that the politicians may be frightened into temporizing by the fear of losing the ignorant vote, but Governor Fifer is himself a product of the public schools and has the courage of his conviction.

THE FRENCH LYCEE.

W. W. BEMAN, ANN ARBOR, MICHIGAN.

THE educational system of France is thoroughly centralized. At the head of the administration is the minister of public instruction and the fine arts. He has charge of public instruction; the organization and direction of public institutions (state or communal) for higher, secondary and primary education; the supervision of private schools; the administration of the Institute of France and the national libraries.

Under him are three directors, of higher education, secondary education, and primary education respectively.

The sum total of the *public* educational institutions, i. e., those maintained by the state and the communes, is termed the University of France.

From the University point of view, the territory of France is divided into seventeen academies. Each academy has a rector at its head who, under the authority of the minister of public instruction, is charged with the material administration of higher and secondary education, and with the methods of primary instruction in his district. The administration of this last belongs to the prefect assisted by an academy inspector.

There are three councils. The Departmental Council of Public Instruction forms a disciplinary council for primary instruction, sees to the application of programmes, and appoints delegates to superintend primary schools.

The Academic Council performs similar functions with regard to secondary and higher education.

The Superior Council, a large body consisting of both appointed and elected representatives of the three educational orders, sits at Paris, and is the disciplinary court of appeal from the other two councils. The minister is obliged to consult it on all matters of programmes, methods, rules, etc., without, however, being bound to follow its opinion.

Public education is the prevailing system, and all private schools have their courses approved and their programmes arranged by the superior council, and degrees conferred by the university.

There are three grades of instruction: — First, the primary, to which the great majority of the French people are limited. This is given in the primary schools and the lower classes of the lycées, colleges, etc. Second, the secondary, taken by children of families in easy circumstances and by poor children who have secured scholarships by competitive examinations. This is given in the lycées, colleges, seminaries, and a large number of private institutions. Third, the higher, taken by those preparing themselves for the professions, law, medicine, teaching, etc. This is given in the Faculties, and certain special schools. The primary and higher education are free.

Of public primary schools there are two principal classes, the elementary and the higher. Instruction in the former comprises: — morals and civil duties; reading and writing; the French language; arithmetic and the metric system; history and geography, especially of France; object lessons and the elements of natural and physical science; drawing, music, and manual labor; gymnastic and military exercises. Children are received from six to thirteen years of age. The schools are both separate and mixed. The certificate of elementary primary studies is given after a public examination which may be taken not earlier than eleven years of age. Education is compulsory between the ages mentioned, but it may be given at home if the child passes a public examination on the subjects gone over each year.

Instruction in the higher primary school comprises, besides a careful review of the work of the elementary school: — applied arithmetic; the elements of algebra and geometry; book-keeping; physical and natural sciences as applied to agriculture, industrial pursuits and hygiene; drawing, design and modeling; common law and political economy; French history and literature; the principal epochs of general history, especially of modern times; industrial and commercial geography; modern languages; work in wood and iron. No pupil is received when under twelve nor can he remain after reaching eighteen.

Secondary education is given principally in the lycées and communal colleges. The leading differences in the two classes of institutions are these: — The expenses of the lycées are borne for the most part by the state, those of the communal colleges by the communes. The professors in the lycées are of higher rank and superior capacity. The courses in the lycées are complete, those in some of the communal colleges but partial. The lycées are principally for boys, though beginning with 1880 a goodly number of lycées for girls have been established.

The officers of the lycées are the administrative officers and the teaching corps.

The administration is in the hands of head-masters, chaplains, stewards, and general superintendents. Their duty is to admit the pupils, keep the accounts, manage the household, and maintain the discipline.

The teaching corps consists of: — full professors, division professors, special teachers of the classics, professors agrégés [the agrégé is an instructor qualified in a special branch, occupying a position preparatory to a full professorship], unlicensed teachers of modern languages, quiz-masters, supplementary teachers. In addition each lycée has a superintendent of studies and discipline.

The professors in the lycées are appointed by the state, and must be provided with certain certificates of capacity.

Secondary education as given in the lycées and communal colleges is divided into the classical and the special. The former does not prepare directly for any profession. It leads to the degrees of bachelor of letters and bachelor of sciences. It is indispensable for those who study law or medicine. It comprises: — French language and literature; Latin language and literature; Greek language and literature; French, Greek, and Roman history; general geography;

modern languages; mental and moral philosophy; mathematical, physical, and natural sciences; drawing.

The special education omits the dead languages and is thought to be better suited to those preparing for commercial and mechanical pursuits. It comprises: — French language and literature; history of France and general history; general and economic geography; modern languages; practical morals and the elements of philosophy; the elements of civil and commercial law and of political economy; mathematical, physical, and natural sciences; book-keeping and drawing.

The lycée receives three classes of students: — the boarders, the half-boarders who spend the day at the lycée, and the day pupils who attend classes merely.

The boarder at the lycée costs the state on the average $250 per year, while he pays but $180. Large provision in the way of scholarships is also made for poor students who have shown their worth in competitive examinations.

Regulations with regard to the employment of time are some what rigid. The pupil must rise at six or half-past in winter; at half-past five in summer. Recitations begin at eight or eight thirty. In the principal classes the length of recitation is two hours. In the elementary division this may be cut in two by a recess of fifteen minutes; other recitations last an hour and a half, or in geography one hour.

The maximum of hours given to study and class-work is, in the elementary division, six; in the grammar division, eight; in the higher division, ten or ten and a half.

The work in the lycée is divided as follows: — Elementary division, three classes, preparatory, eighth, and seventh, at the end of which an examination is held and a certificate of studies awarded. Grammar division, also of three years, the sixth, fifth, and fourth, at the end of which another examination is held and a certificate awarded. Higher division of four years, the third, second, rhetoric, and philosophy, with the baccalaureate examination at the end.

At the end of the seventh class one may enter upon the special secondary education, and in six years receive the corresponding degree.

At the end of the third class one may enter upon work leading in two years to the baccalaureate of sciences.

No student is allowed to go from one class into the next without demonstrating his fitness. Toward the end of the year each professor arranges his students in order of merit, marking them on a scale from zero to twenty. A student securing ten or more in any subject is excused from examination in that subject.

The hours of work are arranged in accordance with the following scheme, the numbers indicating the hours per week given to each subject: —

LETTERS COURSE.	Elementary.			Grammar.			Higher.				
	Prep.	8th.	7th.	6th.	5th.	4th.	3rd.	2nd.	Rhet.	Phil.	
French language,	9½	9	9	3	3	2	2	3	4		44½
Latin language,				10	8	5	5	5	4		37
Greek language,					2	6	5	5	4		22
German or English,	4	4	4	1½	1½	1½	1½	1½	2½	1	23
History,	1½	1½	1½	1½	1½	1½	1½	1½	1½	3	16½
Geography,	1½	1½	1½	1	1	1	1	1	1		10½
Mathematics,	1½	2	2	½	½	1½	3	1½	1½		14
Phys. and Nat. Sciences,	1	1	1	1	1					6	11
Philosophy,										6	6
Drawing,	1	1	1	1½	1½	1½	1½	2	2	2	15
	20	20	20	20	20	20	20½	20½	20½	18	199½

The view of education which seeks expression in the programmes and plans of study is this: — That the best fruit of secondary education is not so much the actual amount of knowledge acquired as the aptitude to acquire more, i. e., the taste for study, the method of work, the faculty of comprehension, of assimilation or even of discovery; and that to measure the progress of the pupil when he leaves the lycée the space gone over is less to be considered than the momentum he has to carry him further.

The programme for the year 1891 may be condensed as follows :—

CLASSICAL COURSE.

PREPARATORY CLASS. AGE EIGHT YEARS.

French, nine and a half hours a week. Reading, writing, and the most elementary rules of grammar.

German or English, four hours a week. Exercises in reading and writing. Pronunciation. Committing to memory indispensable paradigms.

History, one and one-half hours a week. Biographies of illustrious men. Celebrated events. Talks by the teacher repeated by the pupils.

Geography, one and one-half hours a week. Meaning of the principal terms in physical geography illustrated. Position of oceans and continents with respect to Europe and France. Talks about travels and voyages.

Arithmetic, one and one-half hours a week. Whole numbers, mental arithmetic.

Object lessons, one hour a week. Coal, metals, coins, clouds, rain, snow, ice, springs, familiar animals and plants. Two years.

Drawing, one hour a week. Straight lines, angles, circles, polygons, stars, ellipses, spirals, curves of plants, etc. Three years.

EIGHTH CLASS. AGE NINE YEARS.

French, nine hours a week. Reading, writing, spelling, grammar, short essays.

German or English, four hours a week. Conversation, easy texts, oral themes; grammar, regular verb.

History, one and one-half hours a week. Outlines of French history to the death of Louis XI. Short summaries dictated and recited.

Geography, one and one-half hours a week. Elementary geography of the five continents. Principal countries and cities.

Arithmetic, two hours a week. As before. Easy problems.

Object Lessons and **Drawing**. As before.

SEVENTH CLASS. AGE TEN YEARS.

French, nine hours a week. As before. Syntax, logical analysis reduced to its simplest forms.

German or English, four hours a week. Grammar, auxiliary and irregular verbs; easy prose, conversations, themes, dictation exercises. English texts:—Sanford and Merton, Edgeworth's Tales.

History, one and one-half hours a week. As before. History of France from death of Louis XI. to 1815.

Geography, one and one-half hours a week. Elementary geography of France, map drawing.

Arithmetic, two hours a week. Whole numbers and decimals, metric system.

Stones and Soils, one hour a week. Lime-stones, lime-kilns, mortars, plasters, clays, bricks, pottery, quartz, flint, granite, sands, mould, soils, fossils, volcanoes.

Drawing. As before.

GRAMMAR DIVISION.

SIXTH CLASS. AGE ELEVEN YEARS.

French, three hours a week. Prose and poetical extracts from French classics of seventeenth, eighteenth, and nineteenth centuries. La Fontaine's Fables, simple essays.

Latin, ten hours a week. Grammar. Epitome Historiæ Græcæ. Translations into Latin.

German or English, one and one-half hours a week with conference of one hour. Grammar, conversation, written exercises. English texts:—Aikin and Barbauld's Evenings at Home. Corner's Short History of England.

History, one and one-half hours a week. Ancient history of the Orient, Egypt, Assyria, Palestine, Phœnicia, Persia.

Geography, one hour a week. General geography, geography of the Mediterranean basin.

Arithmetic, one-half hour a week. Review of whole numbers, common fractions, decimals. (The professor should still abstain from all theory).

Zoology, one hour a week. Very elementary. Man, vertebrates, articulates, worms, mollusks.

Drawing, two hours a week. Perspective with shadows, drawing from ornaments in relief, architectural fragments, the human head. Two years.

FIFTH CLASS. AGE TWELVE YEARS.

French, three hours a week. More thorough study of forms and syntax. Extracts from La Fontaine, Racine, Fénelon.

Latin, ten hours a week to January 1, eight hours thereafter. Grammar, syntax, elements of prosody, themes, oral and written. Viri Romæ. Profana Historia. Phædrus.

Greek, two hours after January 1. Grammar, accent, paradigms.

German or English, one and one-half hours a week with conference of one hour. Reading, writing, conversation, translation. English texts:—Robinson Crusoe, Franklin's Autobiography, Corner's History of Greece.

History, two hours a week. Grecian history.

Geography, one hour a week. Geography of France and colonial possessions.

Arithmetic, one-half hour a week. Rule of three, interest, discount, measurement of areas and volumes.

Geology and Botany, one hour a week. Principal rocks. Continuous changes of the earth's crust. Stratified and unstratified rocks. Organs of a plant, root, stem, leaf, flower, fruit, seed. Divisions of the vegetable kingdom illustrated. Excursions.

Drawing, two hours a week.

FOURTH CLASS. AGE THIRTEEN YEARS.

French, two hours a week. Complete review of grammar. Extracts from Racine, Boileau, Bossuet, Fénelon, Voltaire. Comparisons between French and Latin.

Latin, five hours a week. Review of grammar. Vergil, Aeneid, books I. and II. Ovid. Caesar. Nepos. Quintus Curtius. Themes.

Greek, six hours a week. Grammar. Xenophon, Cyropaedia. Lucian. Babrius.

German or English, one and one-half hours a week with conference of one hour. Idioms, moneys, weights and measures. Grammatical forms. English texts:—Scott, Tales of a Grandfather. Irving, Columbus, Sketch Book. Corner's History of Rome.

History, one and one-half hours a week. Roman history.

Geography, one hour a week. General geography. Study of the American continent.

Geometry, one and one-half hours a week. Right line, parallels, perpendiculars, angles. Circle, secant, tangent. Simple problems.

Drawing, two hours a week. Drawing from architectural fragments. The human figure. Ideas of anatomy.

HIGHER DIVISION.

THIRD CLASS. AGE FOURTEEN YEARS.

French, two hours a week. Grammatical and literary study of Corneille, Racine, Boileau, Montesquieu. Outlines of literary history.

Latin, five hours a week. Grammar reviewed, prosody. Livy. Cicero, pro Archia, de Senectute. Pliny's Letters. Sallust. Terence, Adelphi. Vergil, Georgics, Aeneid, books III. to VII.

Greek, five hours a week. Grammar. Odyssey, books I. and II. Iliad, book I. Herodotus. Xenophon, Anabasis. Outlines of history of literature.

German or English, one and one-half hours a week with conference of one hour. As before. English texts:—Goldsmith, Vicar of Wakefield. Lamb, Tales from Shakespeare. Macaulay, History of England.

History, one and one-half hours a week. History of Europe and France up to 1270.

Geography, one hour a week. Africa, Asia, Oceanica. Review. Distribution of Races. Principal steam and telegraph lines.

Mathematics, three hours a week. Arithmetic: theoretical, including square root and proportions. Algebra: elements including equations of first degree. Geometry: similarity, third and fourth proportionals, regular polygons, areas of polygons and circles.

Drawing, two hours a week. Decorative figures; Caryatides; Friezes; Doric, Corinthian, and Ionic orders. The human figure and animals. Two years.

SECOND CLASS. AGE FIFTEEN YEARS.

French, three hours a week. Continuation of former studies. Extracts from eleven authors of sixteenth to nineteenth centuries. History of French literature in fifteen lessons of one hour each.

Latin, five hours a week. Prosody. Vergil, Aeneid books VIII. to XII. Horace, Odes. Cicero, against Catiline, de Amicitia. Livy, books XXIII., XXIV., and XXV. Tacitus, Agricola. Latin literature, ten lessons.

Greek, five hours a week. Grammar reviewed. Odyssey, books VI., XI., XXII., and XXIII. Euripides, Iphigenia at Aulis, Alcestis. Plato, Apology. Plutarch, Lives of Pericles and Caesar. Greek literature, ten lessons.

German or English, one and one-half hours a week with conference of one hour. Conversation, reading at sight, essays, etc. English texts: — Shakespeare, Julius Caesar, Coriolanus. A romance of Walter Scott. Dickens, Christmas Carol, David Copperfield. English historians.

History, one and one-half hours a week. History of Europe and France from 1270 to 1610.

Geography, one hour a week. General study of Europe and its various countries.

Mathematics, one and one-half hours a week. Algebra, review, simultaneous equations of first degree. Geometry in space, perpendiculars and parallels to planes, diedral and polyedral angles, polyedra, volumes.

Drawing. As before.

CLASS OF RHETORIC. AGE SIXTEEN YEARS.

French, four hours a week. Selections as before. Literature from Louis XIII., fifteen lessons.

Latin, four hours a week. Lucretius. Vergil. Horace, Satires and Epistles. Cicero, orations pro Milone, pro Murena, Letters. Livy, books XXVI. to XXX. Tacitus, Annals and Histories. Literary analyses.

Greek, four hours a week. Iliad, books VI., XVIII., XXII., and XXIV. Sophocles, Oedipus Rex, Oedipus at Colonus, Antigone. Plato, Crito, Phaedo. Demosthenes, Philippics, on the Crown. Literary analyses.

German or English, one and one-half hours and one hour a week. English authors: — Shakespeare, Byron, Tennyson, Dickens, George Eliot.

History, one and one-half hours a week with conference of one hour for history and geography. Europe and France from 1610 to 1789.

Geography, one hour a week. Physical, political, administrative and economic geography of France and its colonial possessions.

Mathematics, one and one-half hours a week. In addition ten recitations of one and one-half hours for cosmography. Arithmetic, review of work of third class, primes, squares, and square roots. Algebra, review, equations of second degree. Geometry, review, cylinder, cone and frustum. Sphere, great and small circles, tangent plane, surface and volume. Cosmography, celestial spheres, earth, sun, moon, eclipses, solar system.

DRAWING. Development and application of previous studies.

CLASS OF PHILOSOPHY. AGE SEVENTEEN YEARS.

PSYCHOLOGY, LOGIC, ETHICS, AND METAPHYSICS, four classes of one and one-half hours first half of year; five classes of one and one-half hours, second half. In this course two works are chosen from the writings of Descartes, Malebranche, Pascal, Leibnitz, Condillac, and Cousin, one from the writings of Xenophon, Plato, Aristotle, and Epictetus, and one from the writings of Lucretius, Cicero, and Seneca.

The course includes an account of sensibility, intelligence, and volition, of formal and applied logic, of conscience and duty, of family and country, of political duties, of labor, capital, and property, of immortality and religion; also sketches of the principal philosophical doctrines.

GERMAN OR ENGLISH. A conference of one hour a week. English texts:— Shakespeare, Hamlet. Macaulay, Essays. George Eliot, Adam Bede, Mill on the Floss.

HISTORY, two classes of one and one-half hours first half of year and one, second half. Contemporary history from 1789 to 1889.

PHYSICS AND CHEMISTRY, four hours and a half a week. Physics: gravity, equilibrium of liquids and gases, heat, acoustics, electricity, magnetism, optics. Chemistry: water, hydrogen, oxygen, acids, bases, oxides, chlorine, sulphur, phosphorus, carbon, metals, and salts.

NATURAL HISTORY, one and one-half hours a week. Anatomy and physiology. Animals, functions of nutrition, functions of relation. Vegetables, nutrition, reproduction.

HYGIENE, twelve conferences of one hour. Water, air, foods, contagious diseases, vaccination, sanitary police of animals.

A very interesting feature of the lycée work is the intercollegiate contests — so to speak — between the lycées and colleges of the various departments. These contests are for the classes of special mathematics, of philosophy, of rhetoric, and the fifth of special education.

The number of competitors is determined as follows: — from classes of two to ten, two; from eleven to fifteen, three; from sixteen to twenty, four; twenty-one to thirty, five, etc. Students above a certain age are not allowed to compete.

These examinations are held each year, at the same hour of the same day, in the principal cities of the departments, in the city hall, and are under the supervision of the academy inspector, the primary inspector, and a lycée or college professor belonging to a different class from that examined. But one prize is awarded in each subject, and that to the person who among all the competitors passes the best examination.

An inadequate idea of the social value of secondary education would be conveyed if the importance of the baccalaureate were lost sight of.

The bachelor's degree is not a simple certificate of studies, but a university degree, indispensable for attendance upon higher courses of education. Even where its possession is not necessary, it gives a formidable advantage in many competitions. It absolves the possessor from four of the five years of compulsory military service. Hence there is a wide spread ambition to secure it.

There are four sorts of bachelor's degrees: of letters; of sciences, complete; of sciences, limited; of special secondary education.

The examinations occur at the end of the course save in the case of letters. In this there is one examination at the end of rhetoric, and one at the end of philosophy. They are conducted not by professors of the institution where the student has been educated, but by professors of the higher institutions called Faculties. Each examination is both written and oral, the written coming first. Those that fail in this are not admitted to the oral.

The subjects of the first examination in letters are as follows: — Written: first, Translation from Latin; second, Essay in French upon a literary or historical subject; third, Theme in German or English. A second modern language may be offered. Oral: first, Explanations of French, Latin, Greek, and German or English authors; second, Questions upon matters of literature, history and geography, as taught in the third, second, and rhetoric classes.

The subjects of the second examination are: — Written: first, Essay in French upon some philosophic question; second, Essay upon some scientific subject treated in the class of philosophy. Oral: Questions and explanations, first, of parts of philosophy and history taught in class of philosophy; second, of sciences taught in the same class; third, of philosophic authors in the programme.

Of late years these examinations have been quite rigid, over fifty per cent — upon the average — being rejected at each examination.

The account of the baccalaureate would be imperfect without some reference to the radical changes which go into effect in July of the present year.

Students in letters and those in sciences will pursue exactly the same course through the class of rhetoric, instead of separating at the end of the third year. Three distinct lines of work will be offered in the last year, philosophy, mathematics, physical and natural sciences. The bachelor of sciences degree will be abolished. The diplomas given will be inscribed, first, letters, philosophy; second, letters, mathematics; or third, letters, natural and physical sciences.

Several changes destined to make the baccalaureate examinations better tests of scholarship are to be introduced.

A candidate who has passed the written work but failed upon the oral, may be admitted again to the oral before the end of the year without being obliged to undergo a new written examination. A limited choice of subjects will be allowed, and a carefully kept record of one's student career, standings, rank, etc., will have considerable bearing upon the final decision.

It may not be amiss at the end of this study to call attention to a few salient characteristics of the lycée that seem worthy of special consideration.

First: — The teaching force is permanent, made up of men who have gone through a careful special preparation for the work in which they expect to spend their lives.

Second: — The programmes and plans of studies are made up after prolonged research with a desire to incorporate the very best fruits of pedagogical investigation.

Third: — In particular the programme lays great stress upon the continued study and critical use of the mother tongue. It begins a foreign language at the age when the child has special facility of acquirement, and keeps it up till at graduation he has had a most painstaking drill in English or German. It cultivates the powers of observation by early work in natural sciences, and at the same time provides a most solid foundation in the thorough and systematic study of Latin and Greek. The time assigned to mathematics seems small, but the work is well arranged and an excellent preparation in arithmetic, algebra, and geometry secured. The subjects of history and geography are so presented as to qualify well for the duties of citizenship in a great republic. In the last year of the letters course the instruction in philosophy and ethics would not be unworthy of a first-class American college.

Finally, the French programmes provide opportunity for a symmetrical, well-rounded mental development at an age two or three years less than that of the American student who has attempted to reach the same result.

COMPOSITION WORK IN A MASSACHUSETTS HIGH SCHOOL.

We have repeatedly been told by practical teachers that trustworthy accounts of what is actually done in given lines of work are among the most valuable contributions to practical teaching. We have also been repeatedly requested to publish specimens of school compositions. We have always believed in comparing experiences, and we are not averse to printing specimens of composition work if they seem to us likely to be either helpful or suggestive. We propose therefore, to set before our readers briefly a method which we have found in practice in the High School at Concord, Mass., and to show some of the actual work there. This is not done at the suggestion or in the interest of the teachers in that place, though at our request, they kindly allowed us to examine the work. We do not present the scheme, or the results, as the ultimate realization of perfection. We can, however, personally vouch for the truthfulness of the account here given. It offers something definite and tangible for suggestion or criticism, and it shows how at least one school is succeeding in the all important work of getting the pupils to write. We shall be glad either by criticism or by the telling of some other experience to be shown a more excellent way.

The compositions given below are all exact reproductions of the first draft handed to the teacher. They embody none of the corrections or suggestions which were made when they were examined, and we must remind our readers that mistakes are much more apparent when displayed in cold type than when half concealed, as they often are, in a manuscript. We recently received from a principal of a high school in a well known town, a manuscript on composition work, intended for publication in THE ACADEMY, which had decidedly more faults in punctuation, spelling, and grammatical form, than any of the compositions given below. The writer had evidently been unable to see, in his manuscript, mistakes which would have been very plain to him had they appeared in type. The compositions which we print are simply average samples of those which we saw. Our thanks are due to Mr. W. L. Eaton, principal of the school, for kindly allowing us to examine the work and make our own selection.

At the beginning of the term, each pupil is furnished with two blank books containing forty pages of the usual essay size. Composition work is a regular exercise for a brief period every day. Not less than a page is written daily by each pupil, and more is allowed if the subject is found congenial and the pupil is inclined to write more. We give below a list of some of the subjects allowed. It will be seen that they are of a kind not beyond the capacity of an ordinary pupil, usually requiring no special preparation, and are largely on subjects of local or temporary interest. Almost without exception, the compositions begin without introduction or preliminary, say something plainly and directly, and stop. There is no attempt at originality, though from a careful examination, we were satisfied that the individuality of the pupil usually appears in his work. The exercise is occasionally varied by a dictation, which may be made of great value by bearing directly on the work. For example, in all these books which we examined, we found copied out a dictation exercise on the use of *shall* and *will*, and *should* and *would*.

At the end of the first week, five compositions have been written in one of the books, which is then handed to the teacher for examination and correction, and the following week the second book is used for the next five compositions. At the end of the second week the first book is returned to the pupil and the second is handed to the teacher. In this way, the teacher's work and the pupil's work go on uninterruptedly to the end of the term.

The advantages of this arrangement are that the pupil has a daily exercise in composition as in any other subject and learns to write by writing. He is not brought up once a week or once a month before the task of writing a set essay; and by constant familiarity with the idea of writing he ceases to regard an exercise in composition as a formidable task. In the second place, he does his work each day under the eye of the teacher, who can in this way see that he does it out of his own head and without assistance. In the third place, all his past compositions of the term are constantly at hand for comparison, and the teacher is thus able to correct more easily the besetting faults of each individual.

Neither the themes nor the treatment of them require or indicate mature minds. They would be out of place in high school work if they either assumed or demanded profundity of thought or originality of treatment. They are simple school exercises, designed for a definite purpose, the object being to attain the power to set forth in a clear and simple way, what one thinks on a given subject.

FIRE IN CONCORD

Last night in the part of Concord known as Nine Acre Corner a large fire started which at one time threatened to destroy all the buildings on the premises but by hard work the barn was saved. The buildings are owned by Frank Wheeler. There are two stories told of the origin of the fire. One was, that the girl after putting the baby to bed threw a lighted match on the floor. The other that a kerosene lamp exploded. About 8.30 PM Mr. Wheeler noticed a smell of smoke and soon found that one room of the house was ablaze. An alarm was rung but when the firemen reached the place all they could do was to save the barn. There was no water near except a well which however was soon pumped dry. But for the prompt arrival of the firemen the barn would have been destroyed also.

FOOTBALL

Last Thursday the first game of football that has been played here for seven years

The two clubs were the Concord High School and the Hustlers. The game was for the championship of Concord. As early as nine o'clock some of the football cranks came and when the game commenced four hundred people were on the grounds. The hustlers won the toss and took the east side. The High School formed a V and gained about ten yards. After a few short rushes the Hustlers fumbled the ball and a touchdown was made by Jackson. Woods failed to kick a goal. For fifteen minutes the ball stayed in the centre of the field. Then Ballou, full back of the Hustlers kicked the ball. Bradlee dropped on it but it rolled away: then Buttrick also failed to drop on it and Nagle succeeded but it was back of the High School goal and a safety was scored by the Hustlers. If Buttrick had held the ball the Hustlers would have scored a touchdown and probably kicked a goal. After this the ball was kept in the centre of the field until time was called. The score: 4-2 in In the last half the ball was kept near the centre of the field. Ballou hurt his foot while looking at a scrimmage and left the field. A kick was the result and the High School left the field. With only seven minutes more to play they ought to have played it out.

ADVENTURE ON ICE

One day early last spring about twenty boys were skating along the edge of the river. The ice was thick but did not extend very far out in the river. One of the boys had a old axe with him and to amuse himself commenced chopping off pieces of the ice. One of the boys thought it would a be good idea to float down the river on a large cake Accordingly they cut a large piece and when it floated away three boys jumped on it. There did not seem to be much danger of the ice breaking, but one of the boys who remained on the bank called two more boys and they ran to his house and after some trouble launched an old boat.

They started down the river after the cake of ice, but before they could reach it the cake arrived at the stone bridge and the boys pushed it to the shore. They did not intend to desert their strange boat but gathered some dry grass and sticks and started a fire on it. Then they started off again and floated down to the railroad bridge. As it was to dark to proceed any farther the boys came back. They were not in as bad a condition as their would be rescuers. The boat was leaky and before they could get back was half full of water. They drew the boat up on the ice and were turning it over when their weight and that of the boat broke the ice. Fortunately the water was shallow and they escaped with wet feet.

ROCKS ON THE TRACK.

An attempt to wreck a train was made at Seaview Monday night, by placing large rocks on the track, the most of which were as large as a man's head. The section men who walk regularly between here and East Marshfield fond the stones, which numbered about seventy, and they were piled along inside the rails on a sharp curve in the road, where there is quite an embankment.

They were evidently placed there to derail the next south-bound train. The scene was a bold one, as the rocks were place in position at daylight. Some wooden rails were found in the same place about two weeks ago.

HEN STEALING.

In the latter part of August, three or four boys from Concord set up a tent in the woods near Fair Haven Bay with the intention of spending a couple of weeks by themselves in a half civilized condition. At first all went well and probably would have continued so had they not run out of provisions. Then, not being able to satisfy their appetites with grass and clam-shells, they stole out one night with a couple of bags and marched silently along until they came to a farm yard. As they passed around the barn they were confronted by a large dog which started for them but he was suddenly seized by the tail and after being whirled through the air once or twice felt his head strike against a neighboring apple tree with such force as to deprive him of consciousness and the tree of its apples. Then the boys stole into the hen-house and wrung the necks of several hens and thrust them mercilessly into the bags, then they filed quietly back to camp to sleep with quiet consciences and dream of the feast they would have in the morning.

AFTER THE CONTEST.

Now that the campaign is over, it is interesting to read the different reasons given in the Republican papers, for the Democratic victory. Some of the reasons are possibly correct to a certain extent, and some are absurd and amusing. The papers, that, before the election, foretold a great Republican victory, are now the foremost in giving reasons for the defeat.

Some papers attribute it to the McKinley bill, and claim that this measure was unjustly represented by the Democrats. If the Democrats were active in misrepresenting it, did not the Republicans have an equal chance to contradict and describe it in a more favorable light. Mr. Greenhalge said, in his speech at Concord, that the bill had been put in operation before election, so that the people could watch the effects and vote accordingly. The people did watch its effects and voted accordingly and now the Republican papers are claiming that the people had no opportunity to appreciate the bill.

LYCEUM.

Last night, we had the pleasure " of seeing some pictures and listening to a lecture" by Mr. G. P. Gilman, on English life and scenes. Mr. Gilman began with a glowing account of the past achevements of the Anglo-Saxon race and then described some stereopticon views of noted English buildings.

He was a little too eloquent for this town. His language was replete with lofty descriptions and stiff phrases, which he endeavored rather unsuccessfully to render with great eloquence. He ended with a eulogy on Queen Victoria, and nobody seemed very sorry when he finished, although the views were very good.

It seems very poor policy for the directors of the Lyceum to spend all their money, for one or two concerts and sacrifice all the other entertainments to these concerts.

NEGRO QUESTION.

The question of the future of the negro in this country is one of the most weighty that confronts our legislators The negro was emancipated over twenty-five years ago, but he is not yet entirely free. The entense animosity of his former masters toward him, and the prejudice against a race, slaves for over two centuries, still fetter him and rob him of his rights.

Unfortunately for him, he is an important factor, (and an almost powerless one) in all political conflicts. Naturally, the majority of negroes vote the Republican ticket and it is in the interests of the Democrats to supress him. The white men of the South openly declare that the negro shall not vote and they carry out their threats by force of arms.

The northern Republicans, still jealous of the South, circulate the accounts of these outrages, and refuse to hear of any mitigating circumstances. Although, there undoubtedly are many cases of outrage in the South, the accounts in the Republican journals are greatly exaggerated and very prejudiced. The Democratic papers, of course, omit any report of this kind. These conflicts between the two races have occasioned a good deal of dispute as to whether it would not be a benefit to the negros and to the country if, the blacks were removed from our states, and established elsewhere. Several ways of disposing of the negro have been proposed. The first, emigration, was tried and proved unsuccessful. Another which has been mentioned, is to set apart a certain part of this country for the negros and collect them on it.

But it would be very injurious to the interests of our country, to have an alien race, ignorant, and superstitious as they would become when separated from the whites, participating in our government and sharing our laws. The evils which menace the South today would then threaten the whole country to an even greater extent. The negroes would soon loose all the civilization which they have attained and would become ignorant lazy and poverty stricken when beyond the influence of the whites.

Possibly, by removing his legal rights and by making no attempts to educate him, the negro could be exterminated, by this would be a difficult, and to say the least, an unchristian way to get rid of him.

But the most humane and the most practicable way to solve the question is to educate the black man, put him on a footing of equality of the white man, and he will take care of himself. He can be educated, and, what is more, he can and will educate himself. Give him his rights and no more, he will make as good if, not a better, citizen than many of our voters today. He is a necessity to the country, especially to the South, where labor in the field under the heat of a southern sun, is impossible for white men. The prosperity of the South, and of the negro in this country, both depend upon their working together, and a fatal blow will be struck at the promising future of the reconstructed South if the black is taken away.

A View from the School Window.
The Walk from School.
Lake Walden.
Concord Library.
A Letter of Introduction.
Request for Introduction.
Application for Situation.
Catholic Congress.
Leif, Son of Eric.
Revolution in Brazil.
Fire in Lynn.
Fire in Boston.
Dom Pedro's Arrival in Lisbon.
Hawthorne's House.
The School Flag.
A Snow Storm.
Labor Troubles.
An Old House.
La Grippe.
Decoration Day.
A Sleighing Party.
Boating on the River.
Chaucer's "Clerk's Tale."
A Deserted House.
An Old Chair.
Fortune Favors the Brave.
The Strike in Australia.
May Day.
The last Snow Storm.
The Weather Yesterday.
The Snow Blockade.
The Hudson River Tunnel.
The Samoan Question.
Muzzling Dogs.

- Strike in Woburn.
- The Old Year.
- The New Year.
- The King's Daughters.
- Washington's Birthday.
- Sleighing.
- May Baskets.
- April Vacation.
- A Short Journey.
- Stanley's Explorations.
- House Plants.
- Dangers of Electric Lighting.
- What Bacteria are.
- Smokeless Powder.
- Laura Bridgman.
- Carrying Papers.
- A Country Store.
- What Happened at School Yesterday.
- Can a Dog Think?
- The Change in the Weather.
- The Cold Wave.
- The Flag Raising.
- The Roads of Concord.
- Main Street.
- Anniversary at Lexington.
- The Revolution in Brazil.
- Concord River.
- Shade Trees in Concord.
- Picking Berries.
- Yale and Harvard Foot-ball Game.
- The National League.
- The American Association.
- The Players' League.
- Boston Newspapers.
- A New Invention.
- The Silver Question.
- The Increase of the Navy.
- The World's Fair.
- Ice Cutting.
- Toboganning.
- The Pan-American Council.
- Freight Car Couplings.
- The Minute Man.
- Electric Cars.
- Drinking Water.
- A Railroad Accident.
- The Census Enumerators.
- Different Kinds of Money.
- An Entertainment by Deaf, Dumb, and Blind Children.
- The United States Debt.
- Utilizing Coal Dust.
- Artificial Ice.
- Execution by Electricity.
- A Great Engineering Feat.
- Tardiness.
- How Oysters are Obtained.

MILDER SUGGESTIONS OF ENGLISH STUDY FOR SECONDARY TEACHERS OF ENGLISH.[*]

High-school teachers of English are often overworked. A class of the ordinary standard number, — say of thirty or thirty-five, — is much more burdensome to the English-teacher than the same class is to any other instructor, for the reason that English-teaching involves unintermitted examination of pupils' written work. Written exercises in the other languages are brief; but the English compositions must be more than aggregations of sentences. English composition involves the elaboration of a suitable topic throughout a series of related paragraphs, and each exercise must have sufficient length to allow structural development. It is the privilege of the Latin teacher to apply the name *composition* to petty lists of disjointed sentences translated into Latin. The correction of such work is mechanical, and requires but little time and thought. The English-teacher cannot return a composition to its writer till he has viewed it both as a whole and as a mass of details. Hence it comes that the English-teacher gets but little leisure for the nursing of his scientific enthusiasms, and is perhaps in peculiar danger of coming to have no scientific enthusiasm whatever. But this would be altogether lamentable.

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[*] See Academy for January, 1891.

Taking for granted the existence of a class of English-teachers who have great good will and scant leisure, the writer of the article referred to in the January ACADEMY here makes a few further suggestions of study that will prove less exacting than those formerly offered, hoping that from the easy beginnings he now sets forth, a few earnest students may catch an enthusiasm that will carry them into larger fields of investigation.

For the study of historical English Grammar there are satisfactory primers available in the two little books of Dr. Morris, — "Historical Outlines of English Accidence" and "Elementary Lessons in Historical English Grammar, containing Accidence and Word-Formation." Of the second of the books the author says, "it has been drawn up at the urgent request of numerous teachers, who asked me for an easier and more elementary work" than the former. It is pitiful that our teachers of grammar should still resort, for their studies beyond the school text-books, to the unscientific work of Goold Brown. The method of Brown's work is wholly obsolete. A method that is not historical has no standing whatever at the present day. Dr. Morris, in the works cited, writes indeed for intelligent readers who are not philologists. But he is a philologist, and leads in the right direction. No book occurs to the writer so eminently adapted as these to give an inkling of the great truth that the facts of our language can be accounted for in no other way than by tracing their development from antecedent facts. To study various ways of *parsing* difficult constructions is a silly waste of ingenuity. How did such and such forms and phrases come to be what they are, — is the only question fit to engage the attention of the true student of grammar.

Another little book, altogether suited to the needs of interested students of English, is Professor Earle's "Philology of the English Tongue." The title of this work need not repel timid beginners. The book is easy and interesting. It presupposes no acquaintance with Old English, nor does it undertake to present a grammar of the language in any stage. Its aim is to set forth the main features of philological method in simple language. The book can be read continuously.

But books like those of Dr. Morris and Professor Earle will lead only into the dilettante form of English study unless the student pursue, at least in a slight degree, independent investigation in the language itself. This means, of course, that it is necessary to read with an eye to the linguistic facts, portions of literature older than this century. Most suited for such reading are the writings of the illiterate men, whose speech is unsophisticated with classical learning. Preeminent above all other writers of their times are *De Foe* and *Bunyan*. In the writings of these men English idiom is found in its sincerity. It is an infinitely precious fact in our literature that uneducated John Bunyan had a message for his plain contemporaries and could write and print this message in the language which he and they spoke.

Then a study of the various Bible translations, especially of the Accepted Version, of Tyndale and of Wycliffe, will be perhaps the simplest and easiest path backward into the region of later Middle English. Such a course of reading will be found replete with interest. The means for carrying it on are easily accessible. Bosworth's *Parallel Gospels in Gothic and Anglo-Saxon, with the versions of Wycliffe and Tyndale*, is an inexpensive book still accessible, we believe, though dating from 1874.

On his way backward from the 17th to the 14th century the reader will naturally look, so far as his interest carries him, into the writings of Bacon, Hooker, More, Sidney, Caxton, and Malory, and will certainly not omit to sample the *Paston Letters*, — a storehouse of English diction as it was shaped in the 15th century.

Coming to the century of Chaucer, Wycliffe and Langley, we find the means of research in lavish abundance. Almost all of Chaucer has now been beautifully edited, principally by Morris and Skeat; and as to Piers the Plowman, there are Skeat's *little* edition of one text and his great one containing the three texts parallel, with vocabulary and fullest elucidation of all difficulties, philological and historical.

All the books of Morris, Skeat and Earle, referred to in this article and in the previous one, are obtainable, for very moderate outlays of money, of Willard Small, 24 Franklin street, Boston.

In old books are found the keys to modern linguistic difficulties. To find for one's self the solution of one question is better than to be told by another the solution of a hundred. Nothing abides as a genuine ingredient of our culture that we did not work for. We must earn our knowledge. The study of English is getting smothered under a superabundance of proffered helps. Better understand an author as well as we can, be it ever so little, without notes, than understand him to the extent even of 90 per cent. with them.

COMMUNICATION.

To the Editor of THE ACADEMY :—

There is a word I should like to say on the composition question, even at the risk that it may be called "old fogyism."

I would advocate a "trimmer" policy in this day of reaction from old methods, and suggest to my fellow teachers that all extremes are equally dangerous. It is an excellent theory that pupils should write about that which interests them, that with which they are familiar and which does not require special "reading up." Yet in this as in most reforms we may swing too far in the direction of the practical and the work-a-day.

This danger was recently made apparent to me when looking over a series of compositions by pupils who had been allowed to choose their own topics, and had been required to write briefly and daily. Most of the topics, chosen and the manner in which they were treated were those of the average local newspaper. Fires, railroad accidents, and election results were "written up" with a wearying sameness of phrase and choice of details, which showed either that those children read the town paper diligently, or that all crude writing, especially when required to be brief, falls naturally into the same hackneyed, bald, reportorial forms of expression. In the descriptions of various ball games was found merely the dry statement of how this one "muffed" the ball, or that side secured a "touch-down." The discussions of various political questions were worded in the party phrases and from the prejudiced point of view of the political "organ."

These observations raise two questions in my mind. 1. Does a boy's mind really gain anything by writing into never so correct English the events which interest him in the playground, on the street, or at home? Have not local happenings, partisan politics and ball games already place enough in his life? 2. Is there not greater danger in risking that pupils "read up" for their composition in the daily paper, than that they go for their ideas and their expression to the masters of the English tongue?

Composition writing has two aims. To teach the student to think, and to teach him to put that thought into readable English.

Of the two ends the first is vastly more to be considered, and to this common end of all study, no means may be made more effective than writing. Thought *must* precede intelligent writing. If a boy really *thinks* he will soon learn to make himself intelligible. To teach a boy to express what ideas he already has, is of undoubted practical value, as is a legible handwriting. But if nothing more than the bare details of an ordinary event are to be set down, it is to be questioned what the writer or reader gains of pleasure or of profit from the act.

Composition should be taught along the two lines above suggested, and two sorts of exercises may be required; those which lead the pupil to think about some subject in which he is interested, and those which send him to the great models of style for his thoughts and their expression.

Both these exercises must be directed by the teacher who teaches with his conscience, who knows his boys and their interests. Do not be content with the bare outline of yesterday's game from the boy who cares only for ball. Ask him to tell you why he likes ball, what it is which so attracts him, what position he likes best to hold in the game and why. Then have him read, to learn when ball was first played and of the famous games of ball of history and fiction. The reading may be carefully selected for him, and be made diverse. What if he does write it in the words of the book? Since the matter interests him, he is nevertheless writing what he understands and is thinking; his own phrases would be as little "original," — the current coin of daily speech which he has used and heard about him from babyhood.

As Mr. Brownlee wrote in The Academy for March, practice unless intelligent is of no advantage, so I would say that additional usage in the daily, commonplace speech of the playground, the newspaper, and often of the home, under the impression that he is writing English, is harmful to the student. The mere statement of commonplace ideas does not teach a boy to think, and no amount of "telling things in his own words" will teach him the beautiful use of English.

A boy's thoughts with regard to matters which surround his every day life are usually reflected from his adult associates and are not as likely to be his own as his feelings and impressions concerning themes outside and beyond the practical. I believe that a boy may have as original ideas about friendship and honor and sympathy, etc., themes decried nowadays as sentimental, ridiculous for boys and girls to have aught to say about, as he has on the negro question or regarding the cause of the last local conflagration. Lead the children to something beyond the utilitarian, the practical, the present. Let them tell the poet's story, even in the poet's words. It will help as much to make good citizens of them as the ability to write out the hundred misstatements current as to the effect of the last important bill before legislature.

Even that requirement which is made the catch word of composition reform, "making a child write of that about which he knows nothing," surely leads him to learn and to think something new, to reason and to observe; and in reflecting the thoughts of great minds, greatly set forth, students may attain that important, two-fold end of all culture studies, a good English style and a love for good books.

M.

NOTES.

THE publication of the first number of "*The Pedagogical Seminary*," in January of this year, seems to us an epoch-making event in the development of American education. Educational journals we had already in abundance. No new journal in this field, following the old lines and animated by the old ambition for popularity and a large subscription list, with commercial success as its end and aim, could have opened the new era in pedagogy for which the time is fully ripe, and to which thoughtful students of education are looking with anxious expectation. It was reserved for President G. Stanley Hall and for Clark University to turn over at last, in scientific pedagogy, the new leaf. In "The Pedagogical Seminary" we have something veritably fresh and full of promise.

In an introduction of eight pages Dr. Hall sets forth his conception of the Seminary as a recent development of university work. This exposition is in itself an essay on the most central and vital of topics. The seminary, evolving itself out of the needs that naturally came to be felt where, in the great mass of students, the really energetic and hopeful minds were in danger of being swamped and lost, has flowered into the educational institution which today contains all the potency of reform and growth. In this "editorial" we note with profoundest interest the writer's self-abandonment and self-surrender to his theme, — a sincerity of faith and a glow of conviction unknown of late years in educational writing. The essay will indeed give information concerning the seminary, but it will do much more than this; as a perfect specimen of special exposition in the scientific spirit, it is simple and intelligible, genuinely kindling in its effect, wonderful in its efficacy as a stimulus to the careful reading of the pages that are to follow.

The first article of the number, still by Dr. Hall, treats of "Educational Reforms." Touching upon the great epochs of reform in Germany and France from Pestalozzi downward, the writer finds that the present time also is such an epoch. France is doing just now the most in reforming education; but Germany is also in the throes of change. This country, remote though it is from the sources of inspiration in educational science, is nevertheless breathing the new spirit and making ready for new things.

The main idea of Dr. Hall's writing in his first number is that reforms in our education must start from the institutions of the highest grade; that is, from the universities, — and not from the universities in their mass, but from the adytum of devotion to pure science that now is coming into being within the universities, — the *seminaries* of pedagogy. Something more is needed now than petty improvements of detail or contented contemplation of statistics as revealing material growth. Our great state and city officials must adopt the seminary spirit and become receptive. Their function is to discriminate between ideas immediately organizable in their systems and those other ideas, which, however interesting to examine, have no promise of early assimilation in our institutions. These officials must join hands with the seminarists. The latter are on the watch, scanning the whole horizon. They purpose to compare, test, sift all that the intellectual commerce of the modern world brings to their magazines, and they can report of foreign and domestic ventures, whether successes or failures, and so enable the actual teachers and supervisors to study the inauguration of changes as practical and pressing questions rather than as remotely interesting fads talked up by some over-zealous traveler fresh from his tour abroad.

The first task of the seminary, according to Dr. Hall, is the collection of educational materials, — first of all, of educational *things* and *books*. There will be undoubtedly, many a skeptic, who in his contemplation of the seminary work, will choose to stop at this point and prepare his little bit of scoffing, as if the seminary meant a museum, or a museum plus a library. We can only entreat such critics to read Dr. Hall's editorial. The material collection of objects and books is in the seminary for study, for comparison, for correlation with other commensurable things that also issue from educational experience. If the student of pedagogy is too dainty to concern himself with abaci, fraction-frames, globes, atlases, merit-cards, and the whole endless array of school-room apparatus that busy pedagogic brains have devised, he must unlearn his fastidiousness and forget it utterly before he enters the seminary.

The library of the pedagogical seminary is to be thoroughly explored, — each author to be searched for his innermost core of thought, and this most central contribution of his mind to be put in position as having bearings upon past and contemporary phases of educational theory and practice. The labor involved in such research and abstract-making is enormous. Book-notices have fallen almost into disrepute. To report a book thoroughly in brief is almost equal, as a mental effort, to making an original book, yet this must be done, and done, too, with sacred honesty, as must all things else that come within the scope of the seminary.

In strict accordance with this conception of the functions of the seminary, the *Pedagogical Seminary* devotes its first number, after the first article by the editor, to presentation of the contents of numerous specially significant books. We were going to say it devotes itself to book-notices. But we leave that term aside with its connotations. These digests tell the experienced digester of vast expenditure of time devoted to careful reading and abstracting. For this work we cannot be too grateful. The ordinary educational article usurps our precious time. These articles save our time.

Our note is too long to be made much longer by specifying any of these book-digests. But we will ask, how many of our readers know what are Tolstoï's ideas on education, or how many know that he wrote at all on this subject. Miss Haskell reports his strange opinions in two pages. Even Tolstoï is a factor in the great product that contemporary educational opinion is. He has followers and sympathizers. The seminary cannot avoid taking him in hand and must watch for traces of Tolstoïsm floating on the great tides of the century.

A representative of the American Book Company, writing to a New York city paper in opposition to the proposed publication by the state of the text-books to be used in the public schools of New York, — a position which has the cordial approval of THE ACADEMY, — enforces his argument by the curious assertion that the well-known superiority of American schools is due to their superior text-books. It seems to us hardly necessary to go quite so far as this to find cogent reasons why the state should not go into the publishing business. The great obstacle today in the way of improving American schools is the self-complacency of American school men. This self-complacency needs no more assertion. Teachers and superintendents are gradually becoming aware that the foreigner is taking the lead in practical school reforms. The mood now to be nursed by all who have the direction of our public education is the mood of open-minded receptivity of ideas from other nations.

It is not always the young men fresh from college and with their educational experience yet to be got, that grow enthusiastic over the schools of other countries. The late John D. Philbrick, as is well known, made his foreign tour late in life, and he came home full of zeal over the schools of France and Germany. Dr. G. Stanley Hall does not outdo Dr. Philbrick in admiration of the educational work of France. But the other day we heard the president of Clark University set forth in temperate language the lessons which the French are teaching contemporary nations. From that same platform, but a few years before, we heard the ex-superintendent of the Boston schools announce, in language marked by youthful extravagance, that American schools are inferior to German and French schools "in every respect but their cost."

We gladly concede the superiority of American text-books. There is, however, a department of educational book-making in which it seems to us we are behind the peoples of the old world. We refer to books for teachers, — books made by teachers for their own guild, regardless of profit, and with the sole view to the furtherance of the pedagogy of special subjects. Recently THE ACADEMY had the pleasure of commending certain books on the teaching of *Geography*. These were specimens of the kind of books we mean. Germany gives us such books in great numbers. These books are the natural expression of a vigorous educational activity. The dearth of such books is presumptive evidence of educational torpor. In the career of every progressive man comes at last a point when his convictions focalize themselves and come into definite shape, relating themselves systematically to our national needs, and constituting a body of consistent doctrine worth clothing in language and printing in a book. The man then owes his generation a book, and his generation owes him hearty professional recognition. Our pedagogy will never become scientific until such free interchange of the results of thinking and experimenting shall become easy and frequent among our educators.

TEACHERS of English will find very interesting a little book by Henry Sweet intended for the use of Germans in learning to speak English. It should not be necessary to explain that Mr. Sweet is one of the foremost living phonetists. His statements concerning any matter of English grammar or of English pronunciation are those of a trained observer, and should have all the weight properly attributable to a great scientific authority.

Mr. Sweet should be studied especially by teachers because he stands for pure science. That is, — he seeks the simple fact, and aims to set forth this simple fact with all clearness. He stands at the opposite pole from the text-book makers as we know them in this country. He is a grammarian without the least bias towards the making of rules for the avoidance of bad and the choice of good forms of speech. What he hears from the lips of his countrymen he trusts as being English. We all practically come to this, and speak as people about us speak. The way English-speaking people speak is the English of today and this is the English Mr. Sweet tries to teach his German friends in his *Elementarbuch des gesprochenen Englisch*.

We quote a few of what will wrongly seem to our readers Mr. Sweet's peculiarities.

In declining the interrogative pronoun he makes the objective case *whom* and *who*. If we listen to our own speech we shall find that he is right. The second form is far the more usual.

In the question and answer, — " *Who is there? Me*," — he seeks simply to account for the use of the objective *me*. He does not think of uttering a word of reprobation. It is interesting to note that Mr. Sweet accounts for this inevitable objective by referring it to phonetic analogy with the nominatives *he*, *she*, *we*.

The negative of *do*, according to Mr. Sweet, is *don't;* of *have*, *havn't;* of *am*, *ain't;* of *is*, *isn't;* of *are*, *ain't;* of *will*, *won't;* of *shall*, *shan't;* of *can*, *can't*. The past tense of *ask* is *ast*.

To put these forms into cold type and *teach* them as English will seem perhaps to our readers a most heretical procedure. But it must be remembered that this is *spoken* English. The devotee of text-book grammar thinks he must speak the written language. Yet no one really does this. The attempt to do it betrays the pedant.

Yet the colloquial forms are always crowding into print. First they appear in the dialogues of novels and in the newspapers most read by the multitude. Forms that recommend themselves by virtue of some quality of force or brevity finally creep upward into the diction of the more popular writers. Where to draw the line at any given time or on any given occasion is a matter of taste. Some flavor of familiarity is often a good relish in a serious composition.

But it must always be remembered that the colloquial forms are just as *grammatical* as those sanctioned by the most punctilious followers of the rhetorics.

ANY comment on the recent meeting of the Department of Superintendence in Philadelphia would be incomplete if it failed to criticise the hotel arrangements. It is highly desirable at such a meeting that visitors be entertained at a single hotel. Much time is saved, and the social contact which is the best feature of such meetings is stimulated and made easy by bringing all attendants as far as possible under one roof. But any hotel which allows its whole service to be disorganized by the not unexpected arrival of guests, whatever their number, is unworthy of patronage. It is pleasant to linger at table in good company, but it is not pleasant, when the interval between sessions is short, to sit half an hour without attention, and to make shift to get on without napkins, with table spoons for one's coffee, and with one distracted waiter to take the orders of a dozen hungry guests. If there is no better hotel in Philadelphia than the Continental, we hope some enterprising man will start one before the next meeting is held there.

Outside the hotel arrangements there was little to criticise. Citizens and clubs extended a welcome that added much to the enjoyment of the visitors, and the meetings themselves were as good as the department has ever held. The geographical distribution of the members, though not so widespread as might have been expected, was interesting. It may or may not be an indication of educational interest and activity, but it seems worth noting. State superintendents were present from New York, Pennsylvania, Ohio, Rhode Island, Iowa, Wisconsin, Tennessee, Arkansas, and Maryland. We noticed only two city superintendents from the south, Cooper of Galveston, Texas, and Blair of Winston, N. C. Pennsylvania sent twenty-odd, New York, fourteen, New England, twelve, Ohio, seven. Important states entirely without representation were Michigan, Minnesota, and Virginia. No representatives appeared from the Pacific slope. Four New York and five Pennsylvania normal schools were represented, as were Cornell University, Columbia College, and Clark University, Worcester.

Compulsory school legislation occupied on the programme a space commensurate with its importance. Superintendent Dougherty of Peoria gave an account of recent legislation in Illinois and Wisconsin, worthy of high praise for its clear and straight-forward presentation with no waste of words. State Commissioner Hancock of Ohio followed with a rambling talk in praise of the late action in his own state. Mr. Martin of Lynn treated of Compulsory Education in Massachusetts, in a paper which for literary finish and logical arrangement was unsurpassed. Not all would admit his claims in full, but he at least made clear the fact that "Massachusetts never lacks loyal and able sons to sound her praises."

Qualification and supply of teachers rightly attracted even more attention than compulsory education. In this same line Mr. Curtis's address on the Public School and Civil Service Reform carried forward the discussion in a helpful direction. General Morgan's treatment of the question was disappointing, and in general the discussion seemed inclined to wander over a wide range of irrelevant matters. The whole question of securing teachers for the great bulk of public schools is too large and presents itself in too gross a form to be treated with fine and delicate measures. It is like attacking an oak beam with carving tools. First must come the axe and saw; there must be some waste and loss, but the timber must be hewn out into certain shapes with rougher tools before the delicate skill of the artist can be applied. Some one must cut down and trim the tree, and for that there is need of more vigorous movement than simply a turn of the wrist. Something will have been done when the grossly incompetent shall be shut out from the schools. More delicate tests may reveal who is most desirable of several competent persons, but surely no incompetent person should be countenanced. It is perfectly practical to exclude this large class of applicants and the problem becomes much simpler with each successive elimination.

The resolutions adopted near the close of the meeting impressed us as not strong enough worthily to represent the body of men who adopted them. Of all the educational meetings in the country none, in proportion to its numbers, represents so close and vital a relation with popular education over a wide range of territory, as does the Department of Superintendence. Despite the large amount of theoretical talk and irrelevant discussion indulged in by some members, we know of personal knowledge that these men are eminently practical. On this account the resolutions are all the more disappointing.

SINCE the writing of the paper on the French Lycée, which appears in this number, the programme of the work of the last year leading to the degree of bachelor of letters, mathematics, has appeared. This goes into effect in October, 1891.

The following is a brief summary: —

CLASS OF ELEMENTARY MATHEMATICS. AGE SEVENTEEN YEARS.

MATHEMATICS, ten and one-half hours a week. *Arithmetic:* Review of previous work with additions. *Algebra:* Review with additions, including inequalities, study of the trinomial of second degree, its graphic representation, its changes in sign and magnitude, questions of maxima and minima, progressions, logarithms, compound interest and annuities. *Geometry:* Review with additions, including symmetry, translation, rotation, elementary problems and loci, homothetic figures, centres of similitude, power of a point with respect to a circle, radical axis, radical centre, elementary notions of surveying, triedrals and polyedrals, polyedrons, elementary notions of ellipse and parabola, foci, axes, vertices, director circles, tangent, normal, subnormal, the helix. *Trigonometry:* Trigonometric lines, projections, addition-formulas, trigonometric lines of the arcs $2a$ and $1\text{-}2a$, changing product of trigonometric lines into sum, *five*-place tables, resolution of triangles, of trigonometric equations, trigonometric solution of equation of second degree. *Descriptive Geometry:* Problems relating to the right line and plane, perpendicular lines and planes. Method of rotations, change of one of the planes of projection, method of abatting application to the determination of distances, of angles. Projections of a prism, of a pyramid, of a circle, of a helix. *Mechanics:* Statics. Forces and couples. Centers of gravity. Equilibrium. Simple machines. *Astronomy:* Review with additions.

PHYSICS AND CHEMISTRY, six hours a week. Programme of class of philosophy with additions.

NATURAL HISTORY, one and one-half hours a week. Programme of class of philosophy.

PHILOSOPHY, three hours a week. Programme of sixth year of special education.

CONTEMPORARY HISTORY, one and one-half hours a week. Programme of class of philosophy.

MODERN LANGUAGES, one and one-half hours a week. Programme of class of philosophy.

The University Extension agitation in England, taken in connection with that on the Greek question, goes to prove that England grows democratic. The question whether the University Extension lectures shall receive state aid is now the point at issue. The management has heretofore rested mainly with the individual Extension Centres, with the moral support and encouragement of Oxford or Cambridge. Each community has formed its own organization, secured the pledging of the money needed and arranged for the chosen man, usually a graduate from Oxford or Cambridge, to come down and deliver a course of lectures on the chosen topic. But as the aim of the Extension Centres is to bring higher education within reach of those most limited as to means, there has recently been set on foot a movement to secure government aid in the hope of making the post of Extension lecturer remunerative enough to command the permanent services of the best men. The expediency of state aid has been questioned on the ground that if the system were controlled by the government all freedom of choice, individuality, and personal responsibility would be removed from the various centres and too much of "red tape" and the "letter that killeth" be involved. The present plan is to have the state interest in the lectures administered through local committees, which seems to remove the objection to government aid. There has recently been organized at some American colleges an attempt at University Extension, which may be the beginning of a system similar to that in England, but education is less centralized here than in the older countries, and many doubt the wisdom of extension, when the more pressing need is perhaps centralization.

THERE is an interesting letter in a recent number of an English educational journal which gives the impressions and "point of view" of an English woman regarding girls' private schools in the United States. She is evidently impressed with the amount of ignorance the American girl is taught gracefully and skilfully to conceal. She considers, however, that these schools give far more than is demanded of them either by parents or pupils, and that many do remarkably good work considering the problem before them, that is, how to give a girl a liberal education with no serious exertion on her part. She further thinks that all reforms in school methods and ideas come from within rather than from without, from the teachers, in a real desire to promote American culture, rather than in response to any public demand, least of all at the requirement of parents. It is easy to decry the sort of training that is furnished in the average girls' boarding schools. Our own experience, however, leads us to believe that criticism should rest rather on the parents than on the teachers. It is impossible to dispose of wares that are in quality perceptibly above the market. Some fortunate schools have patrons who appreciate the best work, but as a rule we think the standard of teachers is higher than that of parents and we believe the schools would be better if the parents came more nearly up to the teachers' ideals.

We question the statement that most of the girls leave these private schools able to speak one or two modern languages fluently. If the average graduate of either public or private schools has this ability it has not come within our experience to note the fact.

In the *Educational Review* for March, Mr. A. M. Comey gives some statistics regarding the attendance in New England Colleges. In the recent report regarding shortening the course at Harvard, it was stated, as an argument in favor of reducing the requirements and hence the time necessary to obtain the degree of B. A., that the attendance in American colleges has not been increasing in proportion to the population of the country, and that therefore need is shown for a fundamental change in the policy of the colleges. Mr. Comey argues that this statement is based on statistics of too brief a period and one when the condition of the country was not normal, i. e., 1875–1885. Then the great financial reverses of 1870–1878 were having their effect on college attendance, this effect continuing past 1880 because students had not been preparing for college, and were not ready for the entering classes. He then gives four tables, based on statistics gathered from 1850–1890, to sustain his position, that attendance in New England colleges has during that period increased faster than the population. His points seem well taken, and if one agrees with his conviction that the increase of college attendance in New England is a fair, or indeed a less than fair, representation of its increase throughout the country, then one of the arguments for cutting down the course of instruction at Harvard is overthrown.

THERE appeared in *Modern Language Notes* for March a list of modern French texts for the use of teachers, which will be a valuable assistant to teachers or students in choosing a course of reading. The author questions the value of seventeenth century literature as material for the use of high school students of French, and suggests that the time may not be distant when the study of seventeenth century drama will be left to college or university courses. He gives a brief survey of some of the works, both in poetry and prose, of the seventeenth century, and of modern authors covering that period. There follows a longer list of nineteenth century writings, including critical works; selections from the French Romanticists; from writers belonging to the transition period from Romanticism to Realism; some of the plays of Scribe, the great French playwright; two bright and easy comedies; several stories, modern and well suited to class reading; and various historical and philosophical works. All these selections are made with reference to their suitability for class room work and to the needs of students. The names of the publishers are given; "the books mentioned are mostly small volumes, the price ranging from 15 cents upward, comparatively few costing as much as one dollar." Professor A. Lodeman, of the State Normal School, Ypsilanti, Michigan, who compiled the list, will send copies on receipt of ten cents in stamps.

BOOKS RECEIVED.

English Prose; its elements, history, and usage, by John Earle, M. A., Professor of Anglo-Saxon in the University of Oxford. London: Smith, Elder & Co., 1890.

II.

With chapter V. the author passes from "Analysis, the general purport of all that has been said hitherto," to "Synthesis, that is to say the constructive aspect of English Prose."

His first topic is *Elevation*. The teacher of composition will find in this discussion much to reward his study. Two dangers beset the young writer: — in his ambitious moments he is apt to dally with the diction of poetry, and, when he has overcome his first constraint, he easily drops into the colloquial manner. Considering the former of these perils, Professor Earle insists that prose diction and poetic diction are inherently unlike, and do not insensibly pass into each other. The boundary line between them is distinct. This boundary should be kept distinct in the class room. A school theme is an occasion for the practice of elevated prose, of prose unmixed with elements fit only for poetry. The elevation on which the author insists is the elevation of good breeding, of quiet tone, of calm adjustment of the phrase to the matter and the public. The writer's style must not suggest that his subject is running away with him. His diction must be elevated in the sense in which fine manners are elevated.

On the other hand, the young writer often imports into his essay the forms of speech that he is wont to use in the freedom of conversation. While these forms are just as grammatical as the literary ones, they are banned and barred to the writer for reasons as cogent as grammatical reasons would be. The written or printed essay has its own code. That is to say, there is a style for written prose distinct from the style of spoken speech. The art of composition-teaching largely depends on the clear recognition by the teacher of the forbidden and the permitted elements in prose writing. Conversation, written prose, poetry are three separate domains of speech. Literary rules applied to conversation make it stiff; but colloquial license makes writing repulsive and void of impressiveness.

The author next passes to *Lucidity*. Of this prime quality of prose diction he makes the first condition to be "grammatical soundness." Among other interesting grammatical points he here discusses the "placement of the adverb with phrasal infinitive." The question is whether we may say, e. g., *to materially assist*, or whether we must put the adverb either before the *to* or after the verb. Quite in harmony with the general tendency of his teaching, Professor Earle concedes, in this matter, a measure of freedom. We believe the text-books have hitherto been severe in their condemnation of the growing practice of admitting an adverbial element between the *to* and the verb in the infinitive. But certainly the text-books and the professors have not succeeded in regulating the practice of good writers. So long as lucidity is not injured, euphony will naturally determine the form of the phrase. Rules must be formulations of actual practice, and the rule-maker must, therefore, have a wide acquaintance with usage. Too often the maker of the rhetoric knows only the rules laid down by his predecessors in text-book making; and thus it comes to pass that usage outruns the rhetorics.

Such we believe to be the case with the idiom that admits an adverbial element between the *to* and the verb of the infinitive. Professor Earle describes the circumstances in which he would deem it better so to place the adverb. If, in the judgment of the composer, the connection between the *to* and the verb is one that can more easily or with greater impunity be severed than can other connections that would be broken if the adverb were placed elsewhere, then the interposed adverb may advantageously be used. This seems to us altogether reasonable,—the true way in which to make a rhetoric.

The author speaks, with qualification, of this idiom as of an innovation in the language, and throws doubt upon the genuineness of an apparent instance of it occurring in the time of Henry VIII. Something like this interposed adverb we seem to see in Wycliffe, Matt. V., 34, 39:—"*Forsothe Y say to you to nat swere on al manere.*"—"*But Y say to you to nat agein stonde yuel.*"

Under the head Lucidity come naturally to be treated the participles and the pronouns. Of the feebly connected, or "dangling," participle as a cause of obscurity the author has less to say than we could wish. He does well to lay down no hard and fast rule. So long as the sentence remains clear, he seems not to take offence at constructions that would shock the follower of conventional rules. Not to go beyond the text-books, one would imagine that concurrent good usage is strict in its management of the placing and relating of participles. Much exploring in the good prose of the earlier centuries is the only cure for too much deference to rules. To know what English idiom is and to trust this idiom without misgiving should be the aim of the English writer. The English sentence pays no homage to Greek and Latin grammar.

The following sentence from a juvenile "composition" gave no offence to a class of young persons, who found it altogether lucid and euphonious:—"Looking over the fence, a lovely landscape lay before us." Modern writing, not juvenile, abounds in such constructions. Only graduates, fresh from their rhetorics, have the wit to be annoyed by them. Were the English participle inflected, as it once was, so that in the above sentence, e. g., *looking* might by its ending be put into relation with *us*, all would be well. But the English reader puts the *looking* into the right relation just as well without the ending. It is futile to insist that the participle must connect itself with the substantive coming nearest to it or having any special function in the sentence. Had the sentence above quoted been, — Looking over the fence, the children presented to us a beautiful appearance, — there might well be ambiguity.

To such of our readers as wish to make a historical study of the English participle, we commend Mr. Morgan Calloway's pamphlet, "The Absolute Participle in Anglo-Saxon." But wide reading, accompanied by a severe neglect of the text-books of rhetoric, is the best source of knowledge. Especially let each reader observe the effect on his own mind of sentences that transgress the customary rules for the management of the participle, and try to assure himself whether any annoyance he may experience in such case is due to weakness inherent in the sentences or to his own over-cultivated taste acquired from familiarity with the rules.

Under the title *Variation* Professor Earle discusses the ways in which the writer may avoid monotony of style. Passing from variation of words and phrases, he comes to variation of the sentence-type. Here he urges that it is not short sentences, or long sentences, but an agreeable mixture of both, that the writer should contemplate as the object of his endeavor. "The latest advance and the leading characteristic of modern prose is seen in the development of the paragraph. Ancient eloquence had its strong centres of nervous force gathered up in masterly sentences here and there distributed at proper stations in the discourse. These were the culminating eminences, the show pieces of the old world, their legacy of famous bits to be collected *in usum tironum*. Without denying that fine sentences may still be effectively made now and then, I would say that the sentence as a several thing is no longer the beacon of discourse. Or if it is so, it is not, as with the ancients, the grand, the full, the magnificent sentence, but the terse, pithy, sometimes paradoxical, apophthegm. Yet the grand sentence still bears sway in the fond imaginations of classically educated scholars. The surrender of this transplanted and exotic notion, when that surrender becomes general, will be the fall of the last of those strongholds by which classicism has so long curbed the freedom of English Prose."

With Chapter VI. Professor Earle passes to the consideration of *Novelty*. "Every reader of literature must be struck with the fact that words and phrases wear out. Words and phrases which have once been pleasing, and have been favorites of fashion, lose their popularity, become distasteful and are cast aside. We need not go very far back to find examples of this. Adjectives and adverbs are the parts of speech most exposed to the caprice of fashion."—"There are various sources which supply or suggest new material to fill the void of that which is effete. The sources with which we are most familiar are the Classics. But this supply is now well-nigh used up, and it is worth while to consider what other sources there are. Next to the Classics come the modern languages, especially French. Then there is our own old poetry, and the archaisms of our elder prose, and then there are familiar, colloquial phrases, also provincialisms rustic or urban, and finally there is slang. From all these sources something may be taken for the renovation of diction."

These remarks of our author suggest that there is from colloquial diction to literary diction a free passage-way, a *pervius usus*, by which importation, even if it have to be by smuggling, can be kept up. When a word is suddenly wanted by scientific men, they will excavate it from the classic quarry, as they recently did *telephone*. But when the demand for a new word is more vague; when this demand arises from a general feeling of the inadequacy of much-worn words or of round-about expressions to express vividly-conceived ideas; then the temptation is felt to lift a word up from that ever near vocabulary of common life which all understand but are afraid to write, and the word is soon on its way to recognition by good society. The transition of an expression from colloquial to literary diction is facilitated by the newspaper press, which, especially in this country, mediates between the daily speech of the many and the literary language of the few. Once seen in print, even if only in a newspaper, an expression is at once in the way of promotion. It is in the colloquial language that new births take place, actual originations of fresh diction, constantly making good all losses and keeping the great stock of speech ever unimpaired.

From the pages devoted to the treatment of *Figure* we shall quote only the following sentences, and that quite as much for the sake of the words of the archbishop as for the ideas they are cited to illustrate; and we hint to our readers to consider well this quotation within a quotation, and to examine if it does not express a fundamental maxim of pedagogy. "In the Simile, the analogy is stated, perhaps unfolded, at least asserted. But in the Metaphor it is taken for granted. Archbishop Whateley said that 'all men are more gratified in catching the resemblance for themselves, than in having it pointed out to them.'"

Chapter VII. comprises more than fifty pages, all devoted to the discussion of *Idiom*. "Two movements are always at work in every language. On the one side the domestic growth of speech follows the bent of the national idiosyncrasies and is moulded after their pattern. This is the source of Idiom, which draws its essence from every mental peculiarity of race or nation. On the other side every foreign and every philosophical influence tends to reduce Idiom and to bring about a general conformity in the relations of thought with speech."—"The study of our idioms must rest on an enquiry into the successive phases through which we have passed in the literary history of our language."—"The dialectal history of English falls into three well-distinguished periods, the same three periods as we had to deal with in treating of the Choice of Expression and which we there found it convenient to name the Saxon, the Romanic, and the Latin periods."—"By way of illustrating these three eras we may cite a familiar example. The question is sometimes asked, which is right, to say 'It is I' or to say 'It is me'? Both formulae are in use, but the latter is homely and familiar; the former alone is used in what is called correct writing. It is perhaps not so generally known as it ought to be that there is a third formula, one which is older than either of these, and which is in fact the native English formula. Readers of Chaucer are acquainted with his phrase 'I am it,' which is pure English idiom, and which though obsolete with us is still fully alive in the German 'ich bin es.' The other two are respectively the Roman and the Latin. When we say 'It is me' we do but translate 'c'est moi'; and as for 'It is I,' though not verbally Latin, yet it is the outcome of the Latin grammatical doctrine that the verb *to be* takes the same case after it as before it. This is a plain instance of the invasion of Idiom by Grammar."

While it seems to us possible to question the correctness of Professor Earle's treatment of the history of these curious speech-forms, we shall not at present commit that act of temerity, but limit ourselves to the observation that he does not deny the *grammatical* correctness of any of them. The old form is obsolete and for that sole reason can no longer be used. Of the others one is the usual colloquial, and the other the usual literary form. The tendency is for the colloquial form to supplant the literary. The literary form will not be wholly displaced because it is anchored in the Scriptures. But the colloquial form is the more idiomatic, or rather, perhaps, comes the nearer to being *the* idiomatic form.

As between 'the two first' and 'the first two,' the author finds grounds for choice. Both forms he allows to be idiomatic, but the latter preferable because upon the analogy of 'the two first' we should say 'the twenty first,' a form which clashes with the ordinal of 21. It may be noted that he has nothing to say in condemnation of either expression as illogical.

"When we are in doubt upon a question of idiom, which of two structures is the native English, a ready way of determining it is by considering which of the two is colloquial, and still more, which of the two is rustic. If a formula is both rustic and colloquial, we may be pretty confident that it is vernacular. It is colloquial and rustic to say 'Where do you come from?' and 'where are you going to?' It is pedantic to say 'From what place do you come?' 'Whence do you come?' or 'From whence do you come?' or 'Whither are you going?'"

While approving the prevailing code of taste which discountenances the use of words from foreign languages, Professor Earle recognizes that there are a certain number of such words producible in good writing. His taste here, as elsewhere, is catholic. We believe we have nowhere in his book found an instance of violent condemnation of any wonted word or phrase.

It is curious that Professor Earle should in his explorations of American English, have come, of all things, upon the Rhode Island School Reports. In such literature he naturally thinks he finds fair illustrations of American idiom. He finds here a "strange turn" given to the word *disinterested*, as in the following example among others:—'As long as you keep pulling apart, disagreeing with each other, and allowing yourself to be so disinterested in your school, just so long must you expect to suffer.'

Riverside Second Reader. *Hans Andersen's Stories.* Newly translated. In two parts. Part I. Boston: Houghton, Mifflin & Co. The Riverside Press, Cambridge. 1891.

We have here eleven of these charming stories put into good English. The collection is prefaced by a rather extensive account of the ways in which these tales excel as reading for children. The translations might be used to advantage in secondary schools for exercises in German composition in connection with the originals, many of which are read in beginning classes.

Boston Society of Natural History. Guides for Science Teaching. No. VIII. *Insecta*. By Alpheus Hyatt and J. M. Arms. Boston: D. C. Heath & Co., Publishers. 1890.

This is a work admirable in its design and scope, but curiously full of all sorts of errors, many of which seem incredible. For instance, it is inexplicable that authors capable of making so good a book, for it is a good book, could print "strigillations" when they mean "stridulations," throughout the entire work. The English of the book, moreover, is astonishing. We do not recall a single example where the adverb "only" has its proper place in the sentence. "Faint odors can only be perceived by means of the antennae," p. 23, and "In a room which only admitted light through two orifices," p. 21, are good examples of the care with which the adverb is uniformly put in the wrong place. "Either—or" and "neither—nor" are continually used on speaking of three or more objects. The use of the imperfect tense in stating facts is open to criticism, as is also the tangling up of pronouns so that one has to reread a sentence to understand the connection of clauses. The latter fault is carried so far sometimes as to bring the pronoun into the wrong number, as in line 18, page 33, where "their" should be either "the" or "its," to make it refer to "note" instead of "species."

The Students' Series of Latin Classics. *Livy*. Books XXI. and XXII. Edited on the basis of Wolfflin's Edition, with Introduction and Maps, by John K. Lord, A. M., Associate Professor of Latin in Dartmouth College. Leach, Shewell, & Sanborn: Boston and New York. 1891.

The Elements of Physical Geography, for the use of Schools, Academies, and Colleges. By Edwin J. Houston, A. M., Professor of Physical Geography and Natural Philosophy in the Central High School of Philadeiphia; Professor of Physics in the Franklin Institute of the State of Pennsylvania. Revised Edition. Philadelphia: published by Eldredge & Brother, No. 17 North Seventh Street. 1891.

Harper's Educational Series. *Harper's Sixth Reader* by James Baldwin, Ph. D., Editor of "Harper's Readers." British Authors. New York: Harper and Brothers, Franklin Square. 1890.

An Etymological Dictionary of the German Language. By Friedrich Kluge, Professor in the University of Jena. Translated from the fourth German edition by John Francis Davis, D. Lit., M. A. London: George Bell & Sons. New York: Macmillan & Co., 112 Fourth Avenue. 1891.

Longmans' *Primary School Grammar*, by David Salmon. New Edition. New York: Longmans, Greene & Co. 1891.

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THE CORNELL COURSE IN RHETORIC AND ENGLISH PHILOLOGY.

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[The following paper forms the substance of an inaugural discourse delivered in January, 1891. Here and there traces of the lecture-style will be evident. For these the reader's indulgence is craved, since to remove them altogether would have involved a recasting of the entire composition. It should be stated for the information of those who are unfamiliar with Cornell matters that, in accordance with the policy adopted by the trustees in 1890, the department of English Literature is now exclusively in charge of Professor Corson; Rhetoric and English Philology constitute a separate chair. The required Rhetoric of the Freshman and Sophomore years is given by instructors, under the direction of the professor. Junior and Senior Rhetoric is wholly elective, and is given by the professor, who has also exclusive charge of the Philology.]

BEFORE taking up directly the proper treatment of rhetoric in the Cornell course, let me introduce a remark, commonplace enough, so commonplace indeed as to be almost threadbare, and yet not to be omitted with impunity from any discourse like the present. This remark is upon the difference between a university and a college. Cornell, like all other American institutions bearing the title of university, is one only in a restricted sense. A good part, if not most, of the study pursued here in the first two years is in the line of *required* subjects. To this extent, then, Cornell, despite its liberality in other respects, is still in essence a college. Our university work proper does not really begin before the junior year. Not before is the candidate for degrees at liberty to elect his special line or lines of study.

Among the studies required in the first two years is rhetoric. It is required to the extent of two exercises per week throughout the two years. Being a required study, it is of necessity purely practical in its aim and method. Our aim is quite modest. We merely try to teach several hundred young persons how to express themselves upon paper clearly and to the point, avoiding what is conveniently called "bad English" and achieving something like neatness and propriety of diction. So much at least of style we regard as needful for advanced work in science, philosophy, history, political economy, the classics, and modern literature.

Here our required rhetoric ends. From here on the study is to be not merely elective, but of a higher and — if my views obtain approval — of a totally different order. Our mid-way students, so to speak, have learned to write. Not that they have become writers, in the true sense. Heaven forbid such presumption in the English department! Instructors and professors, text-books, essays, and drill, will not make one a writer in two years, or in twenty years. The quality of style, as Emerson neatly put it in returning a manuscript submitted to him for publication in the *Dial*, — is something that can be neither commanded nor described. It is a gift straight from heaven, like the touch of the artist; or it may be an inheritance, a family possession; or if it be an acquisition, it can be acquired only through years of patient, conscious self-correction and wrestling with the actualities of life. One must first have something to say that will not rest unsaid — the phrase is Lowell's — and one must learn, not from college professors and manuals, but from the great writers of our mother tongue, how to say it.

What, then, is the professor to offer to his juniors and seniors in the way of rhetorical study? I meet the question at the very threshold with the counter-question: What is every professor to give to his advanced students? Certainly not facts, statistics, drill, or other general utilities. Every professor, if he be truly alive to his vocation, will make it his supreme object to open the eyes of his students to all sorts of possibilities, to widen their horizon, pluck from their eyes the scales of conventionalism and provincialism, and inspire them with a love of study as study. This may not be the teaching of the old-fashioned college, but it is the only teaching worthy of the modern university.

Now to put these generalities — perhaps you are ready to call them glittering generalties — into the concrete, and evolve a university instruction in rhetoric, I believe that the professor will achieve the best results, first, by dismissing every purpose or expectation of making *writers* of his students, second, by opening their eyes to the characteristics of style in men who *are* writers.

This has at least the merit of offering something which is susceptible of pedagogic measurement. No professor, however gifted, would undertake to train his students to write like Milton, or Johnson, or Coleridge, or Carlyle, or De Quincey. But the professor of rhetoric should be able assuredly to train students in just appreciation of style-differences between Milton and Johnson, between Carlyle and Coleridge.

Let me sketch an ideal course in rhetoric, following the historico-comparative method of our day. In a series of lectures running through two years, the lecturer would treat the art of rhetoric as it was developed in Greece and Rome, modified in the middle ages, and re-established in modern times, in France, England and Germany. He would give a résumé of ancient and modern schools of criticism, of the Graeco-Roman and modern European conceptions of poetry in general and especially of the drama, and would point out the differences between ancient and modern oratory.

That such a course would be of surpassing interest is beyond question. But is it possible? I do not know where to find the man able to handle a theme so diversified. To grapple with it at all, one should have the insight and courage of a Lessing, together with the superadded learning of the hundred years since Lessing's death. One should be an excellent scholar of Greek and Latin, thoroughly familiar with ancient life, ancient feelings and habits. One should also be tolerably conversant with medieval Latin literature and with at least medieval French literature. For without a knowledge of the formative part played by France in the twelfth, thirteenth, and fourteenth centuries, one would be utterly at fault in attempting to trace the origin of modern letters. And, last not least, one should be familiar with five great modern literatures, to wit, Italian, French, Spanish, English, and German. I lay stress upon the word *familiar*. It will not be enough to know the grammar of the five languages, and the names and a few of the best writings of the best authors. One should perceive and be able to reproduce forcibly the distinguishing features of each of the great peoples of Europe, its nationality as expressed in the sum total of its happiest imaginings.

These are enormous requisites, certainly. Yet, if we are agreed that style in its essence, as distinguished from mere phraseology, is something relative and not absolute, something that has always varied and will always vary from land to land and from generation to generation — like our laws that are popularly supposed to be pure reason, — we must also admit that to know style we should first know the men who have made it and been made by it. An illustration will perhaps render this clearer. We all know our Shakespeare. At least we think we do. His heroes and heroines are among our household names. His very words and phrases enter into our daily speech. He is to us so indisputably great that we have no patience with any one who may presume to utter a word of qualification or dissent. But it was not always so with Shakespeare. There was a time, even in England, when he stood in the background. Now let us turn to France. How long was it before the great English dramatist succeeded in getting even a hearing from the worshippers of Racine and Molière? Even at the present day, despite the frantic efforts of Victor Hugo and the entire Romantic school, it is a question whether the Frenchman of only average culture is fairly qualified for entering into Shakespearian style. Why should this be? Is the Frenchman lacking in sympathy with the truly great, in perception, imagination, reasoning? Is he obtuse to tragic situations, or the play of wit and humor? The assumption would be a libel on all the facts of history, for if there be anywhere in the modern world an audience that goes to the theatre with the set purpose of entering into the play and guaging the *dramatis personae* for just what they are worth, it is the audience of the *Théatre Français*. Not a tone, not a gesture, escapes them. They are generous in approval and fearless in blame. Why, then, should the Frenchman have such difficulty in appreciating what we Anglo-Americans accept as a matter of course? Because he is a Frenchman, inheriting certain likes and dislikes, trained to certain canons of literary art. This is evident in Taine's History of English Literature. The author is a man of wide reading and quick sympathies. He tries very hard to be just in his estimates. In no instance, to the best of my recollection, can he be charged with wilful misrepresentation. Yet he does misrepresent, and frequently. But it is because he approaches his theme from the wrong side. He brings to bear criteria of taste that we do not accept.

On the other hand, how many of us can be truly just to Béranger, Lamartine, or Alfred de Musset? Or to Racine and Rousseau? We shrug our shoulders complacently over many a passage that, I am confident, goes straight to the French heart. And we have as much (or as little) right to do so as the Frenchman has to shrug his shoulders over the tiresomeness of Wordsworth.

Let me give two more examples of quite a different kind: Cervantes and Dante. For centuries the great Italian was apparently buried in oblivion. Glance over the literature in vogue in the sixteenth, seventeenth, eighteenth centuries, outside of Italy, and whenever you find his name mentioned, note the fact carefully. Your collection of notes will not be burdensome to you. By the eighteenth century he seems to have been clean forgotten. What could men and women of the rococo gilt-and-blue porcelain age have in common with the saturnine visage that had faced the terrors of hell? And the revolutionists were too busy preparing a hell of their own to trouble themselves with the speculative terrors of the medieval church. I find the most signal evidence of the neglect into which Dante had fallen, in the circumstance that his name and genius figure so little in the writings of Goethe. Yet Goethe was not only pronouncedly cosmopolitan in his tastes, but he was avowedly fond of Italian in particular. The language and the people attracted him strongly. His knowledge of certain epochs of Italian literature was extensive. I need only recall to your recollection the fact that he translated the autobiography of Benvenuto Cellini, and the still more significant fact that one of his most carefully matured dramas, that one in which his dramatic style attained its supreme ripeness, (the *Iphigenie* possibly excepted), is devoted to the portrayal of the poet Tasso. And in this drama occures one of those rare passages in which Goethe forgets his studied reserve and speaks from his own heart. I mean the superb tribute paid by Antonio to Tasso's great rival, Ariosto. This passage is a characterization of Ariosto such as none but a great poet and a great admirer could have conceived. It throbs with emotion, but emotion tempered with uncommon wisdom. Now to us, in this year of grace, 1891, both Ariosto and Tasso are but little more than names, while the "poet Saturnine" of Ravenna overshadows the whole

Italian peninsula. We read our Dante, probably in Longfellow's translation, have our Dante illustrations by Doré, we may even belong to a Dante club. For us Dante is the unquestioned father of modern poetry. Are we then wiser than Goethe and better judges of poetry?

A word upon Cervantes. His great work, *Don Quixote*, is not wholly unknown to us. In fact we are quite favorably disposed to it as an agreeable pastime. The adventure with the windmill is quite entertaining, we can almost see the barber with his brass soap-dish. Sancho Panza's home-brewed wisdom is not lost upon us. But do we truly understand the work? Is it anything more to us than a book to laugh over now and then? Do we learn from it the author's knowledge of his countrymen, and study it as the embodiment of the Spanish character, and indeed of the Spanish nation on the verge of its long decline? I fear not. Don Quixote cherished the ghost of chivalry to his own undoing. Spain was then staking and losing her all upon false religious pride and family caste. If we read the history of Spain with Cervantes as our interpreter we shall fare safely. But I fear that not many of us are likely to do this.

I have touched upon only a few of the countless problems that must be solved by everyone who would undertake to discuss style in the broad historico-comparative manner. But even these few will make the nature of the study and its difficulty sufficiently clear. It transcends the ability of the ordinary college professor, for it demands, as I stated at the outset, an unusual combination of the scholarly and the critical faculties. These were united in the great Lessing, who wrought nobly and thoroughly for his century. But let us not forget these two considerations: first, that modern times have produced but one Lessing, as Greece produced but one Aristotle, Rome but one Quintilian; second, that Lessing wrote before the rise of the modern historical school. Lessing knew his Greek and Latin authors perfectly, but he knew little of the ethnological, mythological, and political conditions out of which those literatures were evolved. Furthermore, he was wholly ignorant of the evolution of literature in the middle ages. In fact, I suspect that he looked upon the middle ages with profound dislike, as a period of superstition and priest-craft. In a man of the age of reason this is not surprising. But we do not live in the age of reason. We have learned to mistrust mere reason when applied to matters of national taste and usage. Our motto is: Understand, rather than judge.

Hence there is need of a new Lessing to fit the new conditions. And until a new Lessing appears, to teach us our new guiding principles, to lay down the lines of research, I must believe that our wisest policy will be to wait, each one exploring that portion of the field which lies nearest to hand.

Which portion, then, lies nearest to the professor of rhetoric in an American University ? The good lies so near, why go out in quest of the remote ? Yet, strange as it may appear, all my colleagues and predecessors, unless my recollections deceive me, have neglected the near good for the doubtful remote. They have displayed much erudition and ingenuity in adapting, as they call it, the dicta of Aristotle, Quintilian, Horace, Boileau, Lessing, Schlegel, Herbert Spencer, Bain, and others, ancient or modern, to the supposed needs of culture. They expound systems of style, draw distinctions broad and deep between prose and poetry, between one kind of poetry and another, categorize down to the turning of a hair the varieties of figures of speech, and discourse of invention as if it were a principle to be mastered and applied like the rule of three. Not one, I believe, has propounded to himself these questions: What is *English* style ? Where, when, and how did it begin ? Has it any features fundamental and constant ? Any fashions past or passing away ? How closely does it keep pace with national life ? Yet these are the questions that concern the good that lies so near, our own inherited ways of thought and speech. And it is this good, so near and so dear, that I purpose acquiring for myself and imparting to others. In plainer words, I desire to give to my pupils a thorough instruction, as thorough at least as time will permit, in the history of English style, chiefly prose style. I hope to succeed in tracing the establishment of our style in the Elizabethan period, and discussing some of its more striking vicissitudes in the three following centuries. I shall endeavour to disclose the forces, social and political, native and foreign, at work in each era, moulding the forms of life. This can be done in outline, in the junior year. The senior year may then be devoted to the somewhat minute study of three or four authors akin in style and forming a chronological group. Thus, for one year, Johnson, Gibbon, and Burke. For another year, Bacon, Ben Jonson, and Milton. In strictness of course, one can hardly speak of Milton as akin to Bacon, much less to Ben Jonson. Nevertheless Milton is an Elizabethan, and should be approached from the sixteenth century. To echo Matthew Arnold's phrase, he is the last of the Immortals.

Such a course, which I have barely indicated, not even sketched, offers many practical advantages. Not least among these is its adjustability to students of varying kinds (I do not say degrees) of preparation. Twenty years ago the professor of rhetoric had the right to assume that all his students were familiar to some extent with the ancient classics. Today I have certainly no such right at Cornell. Comparatively few of my students have any knowledge of Greek, and very many are ignorant of Latin also. Whether this loss may be considered as adequately balanced by an increased knowledge of French and German is a question that I refrain from entering upon in this place. For good or for evil, the fact remains that a very large percentage (perhaps one-half) of my classes is wholly dependent upon modern literature for their training. Hence I am led to doubt the availability for classes as classes of any lectures, however carefully prepared, that rest to an appreciable extent upon ancient literature.

Besides, the cry all over the country is: Give us more English! Do not let our young men and young women grow up in ignorance of their mother tongue! The cry is not always, I fear, perfectly sincere. English is used by some as a handy battering-ram with which to break down other studies that are the basis of all culture. Nevertheless the cry does come only too often from the heart and expresses a real need. Let us not fail to meet it.

The best way of meeting it in a university is to train teachers of English, teachers who can teach and not merely hear recitations and correct compositions by rule. And here I submit the question: What better training can there be for the teachers of English in our high schools and academies than some such course as the one above indicated? Whoever pursues it will have in the two years an opportunity of studying many fashions of style and learning to distinguish the merely fashionable from the abiding good. He will read at least twenty great authors of different kinds, one argumentative, another impassioned, a third speculative, a fourth witty; some concise, others discursive, but all good and all representative. He will read them in extracts ample enough to create a distinct impression of each one's individuality.* Finally he will be called upon to express

*The most practical volume of prose selections is that recently edited by Professor Garnett, under the title, Selections in English Prose from Elizabeth to Victoria. Each extract is of sufficient length (the average is about twenty pages) to do justice to the author's manner, and the authors themselves, ranging from Lyly to Carlyle, are truly representative. The entire volume, 701 himself frequently in writing upon points that demand especial attention. In the senior year he will prepare himself for original research, by studying a group of authors minutely and putting his discoveries and comparisons into statistical shape.

Am I too sanguine in believing that all this is eminently practical and eminently English ? I said in a previous connection that we should not look to our professors of rhetoric to create writers. But I did not say that the professor could not train his students in writing. That is quite another matter. I certainly wish to give my students abundant exercise in the use of the pen. But I would make the exercise purely practical, upon topics discussed thoroughly in class and admitting of an exact formulation of acquired knowledge. In this way it should be possible to redeem writing from the sad disrepute in which it is usually held. We instructors have ourselves to thank for this disrepute. We "give out," as it is called, topics wholly remote from class-room work in English. Thus we ask our students to sit in judgment upon Mary Stuart, or upon the Morality of Homeric Men, or upon High License versus Prohibition. The last two topics are taken at random from a work that the author calls a practical rhetoric. I can see, once for all, that these and similar subjects, may be of use in the school room. For here they give the master the means of coercing his boys and girls to put down in black and white what they have just learned from their text-book or lecture. But for the college such subjects are worse than useless. They lead to shallowness of thought and flippancy of style. If a young man has aught to say worth listening to upon the unfortunate Queen of Scots, he should say it in the historical seminary; if upon the Men of Homer, in the Greek seminary; if upon License and Prohibition, in the Moot Court, or in the philosophical seminary. Our English course should be reserved for the discussion of facts and principles needful to the understanding of English authors.

At all events, I hope that my students will promptly learn to regard writing as part of the regular business of learning. Every

pages, can scarcely be mastered in a single year with two hours a week. It would not be safe to undertake more than two-thirds, say twenty authors. A brief test of the work, (from January to March) has already satisfied me that the history of English prose style is anything but *easy* reading. Almost every page gives rise to one or more side-issues that demand copious and incisive discussion. The student cannot possibly work his way through such reading without opening his eyes to all sorts of problems in style.

hour in the class room will unfailingly bring with it its own matter of debate. Questions of fact or of principle will spring up in the concrete and will call for an answer in the concrete. As soon as matter enough has thus accumulated, I shall ask that it be written down on the spot, usually from memory, and in readable shape. If that shape give evidence also of the gracious moulding finger of style, all the better.

The instruction in rhetoric has called for such prolonged discussion that I have left myself little time for the treatment of English philology. Fortunately philology, in the sense of linguistics, is a study that admits of little debate. Its boundaries may be drawn sharply. To qualify one's self in this branch, one must pass through a certain routine almost as vigorous as that of a military school. To read such works as Trench *On Words*, or to hunt Skeat's dictionary for etymologies, is not a waste of time; but by the side of real study, it is mere dilettanteism. One must begin at the beginning and read the English language in its recorded forms, from Caedmon's brief hymn of the seventh century, through the reign of Alfred, and past the Norman Conquest, to and into the period of Chaucer. From the year 1400 on, the language becomes comparatively modern. Of course I do not imply that the student is to read all the texts preserved from these seven centuries. The remains called Anglo-Saxon and Early English are numerous enough to engage one for a life time. But one must acquire at least a familiarity with the vowel and consonant system of the language, its declension and conjugation, some of the more obvious dialectic differences, and an insight into the relations between English and the other languages of the Germanic or general Teutonic group. All this demands patience, energy, and more time than the uninitiated suppose. I have marked out in the University register eight hours of work, three in the first year and five in the second. This, I fear, is not quite enough. There should be an additional year, or course, of two or three hours. There are two difficulties to overcome in the study. At least they may be discussed separately, although at bottom they are one. The first is to overcome the habit of *guessing*, and to acquire the habit of accounting for everything by rule. Where two forms look much alike, the beginner guesses them to be the same. This is wholly unscientific. It is the student's business to demonstrate by rule, either that they are the same, or that they are organically different. To go by the mere look of a word is no better than to classify insects by color. The second difficulty consists in the beginner's unfamiliarity with the methods and terms of scientific grammar. Latin and Greek, French and German, are very different languages. But they are taught in the same traditional, empiric way. A grammar is put into the beginner's hands and he is ordered to commit to memory certain categories of nouns, adjectives, verbs, etc. Whatever does not fit into these categories is conveniently thrust into a foot note as an exception. The grammar itself, to begin with, rests upon a gratuitous assumption, namely, that a few writers of a limited period constitute the *jus et norma loquendi*, and that locutions not found in them, or differing from theirs, are bad style, or even bad grammar. The framer of this phrase, *jus et norma loquendi*, has himself been for two thousand years one of the mainstays of the Procrustean grammar. I admit, of course, that a good deal of formalism, so to speak, is necessary in learning such languages as Latin and Greek. But I believe that there is altogether too much of it, especially in Latin. Recent Greek grammars are gradually becoming equated to the teachings of philology, but Latin seems to be in a hopeless way. We still hear the old jargon of five declensions and four conjugations and irregular verbs. In marked contrast with this the later grammars of Anglo-Saxon, Gothic, and Old German are from beginning to end in accord with the principles of science. Consequently the beginner in them finds himself in a new world. He encounters, probably for the first time, the mysterious *Ablaut*, or vowel gradation; his nouns go by vowel and consonant declensions; his verbs are strong and weak, and the grammarian almost apologizes for speaking of an irregular verb. All the way through he is taught that certain vowels in the stem syllable are modified (umlauted) by other vowels in the termination syllable. But when he looks at the termination syllable, he does not find the particular vowel he expects to find, and then he is informed by the instructor that it is assumed to have been there in prehistoric times, but has dropped out or been replaced by another. All this, coming at the very outset, is perplexing not to say discouraging, but it is not to be smoothed over. It is to be encountered and overcome, and when overcome it is felt to be well worth the trouble. One realizes for the first time how a language, our language let us say, has grown. *That* is the supreme good to be got from the study of English philology. We place the pre-historic embryo, as it were, under the miscroscope, we watch it pushing forth members to right and left, developing organs, losing some and regaining others, subjected to contaminations and mutilations from other surrounding organisms, modifying its general structure to suit fresh needs, and—lo, before we are aware, the decisive touch of a Chaucer and a Shakespeare moulds it into permanent literary shape.

I have said that it should be the mission of Cornell to train genuine teachers of English rhetoric. Let me add that it should be no less her mission to train genuine teachers of the English language. Would that there were some gentle but effective way of coercing our high school teachers into this study. For the relation between school and university might be made more intimate and more efficient in this study of English than in any other. I am betraying no secret when I confess that the admission-requirements in English are still far from yielding satisfactory results. The problem which perplexes not only Cornell but all our colleges and universities is how to obtain from candidates for admission to college, correct spelling, correct grammar, and the writing of coherent sensible prose. These simple primary acquisitions underlie all subsequent study in all departments. Yet they are apparently the hardest to enforce. The root of the trouble is, I suspect, in the defective training of the school teachers. They may be good in mathematics, good in Latin and Greek, or in the modern languages, but they are not as a class good in English. Very few of them have pursued special study in the history of the language or in the history and theory of composition. They may know one or two text-books by rote, but they have never been led to an understanding of principles, or been trained in scientific methods. Yet very many, I am confident, would be sincerely glad of the opportunity, were it within reach. Perhaps those who are already in positions cannot afford to quit them, even temporarily, for the sake of higher learning; but to all candidates for teacherships, and especially to all who are studying as undergraduates for the profession, I can only give the advice to consider most earnestly their training in English. In Germany the state enforces, I believe, a certain amount of university training in German philology from all those who wish to obtain the position of gymnasium teacher of German. Whether the state of New York will ever go to this length, is a question for the future. But whether legally required or not, a thorough specific training in the history of the English language and of English style should be prescribed by the unwritten moral code. No one is truly fit to conduct high school classes who is not himself trained far beyond the routine needs of the recitation-room, and is not in touch with the scientific spirit of the age. Liberally trained high school teachers would speedily exorcise the terrors that now haunt the study of grammar and composition, for they would impart something of their own insight and freedom of thinking to their pupils. And college professors in turn would be deeply grateful for the change. There is not one of us, I am sure, who would not feel his burden of instruction materially lightened.

IS IT EXPEDIENT TO TEACH LATIN, ALGEBRA AND GEOMETRY IN GRAMMAR SCHOOLS?

W. L. EATON, CONCORD, MASS.

THE question proposed concerns a wide field of educational effort. It is suggested, doubtless, by the movement in our leading university for the reduction of the age at which men now take the A. B. degree. Its exhaustive discussion, therefore, involves more time than I can give, and profounder research than I have made, or, indeed, my very modest attainments can compass. Still I find myself possessing convictions upon this subject not born of the hour, but such as were formulated long ago. These convictions, whatever their worth, are based upon my observation of Massachusetts schools, and upon such impressions of schools elsewhere in this country and in Europe as a busy man acquires through the ordinary channels of educational intelligence. For about eighteen years I have been a teacher in a high school, which I trust is as good as the average high school. For many years, too, under conditions somewhat anomalous for Massachusetts, I have had the superintendence of all the common schools in the town in which I teach. These schools exist under a unique organization, exceptionally favorable for developing all educational ideas which our school board may approve and adopt. Because of this organization, my relations to the schools which I superintend are very close, — almost as intimate as those of grammar school masters to their schools. I make these personal statements merely to emphasize the fact that my interests and responsibilities do not begin at the front door of our high school house. Whatever strictures I make upon the grammar school education or curriculum, I make as of right, upon an educational system for whose deficiencies I am as responsible as any master. So far as deficiencies exist in the schools under my care, I am far more responsible for them, because my official relation to the authorities brings me greater opportunities to apply correctives. I shall not be charged with want of sympathy with these schools, or with making ill-considered criticism. It is very easy for college professors to speak their mind about the work done in secondary schools; and high school teachers may be inclined to hold the grammar school teachers accountable for much that they see in their pupils which meets their disapprobation. I am discussing the curriculum of these schools, and not the teachers.

At the outset, I said that I supposed this question due to a movement at the university. Whether the impulse came from Cambridge or not, I feel certain that the times are ripe for its discussion and solution. The question before us, however, is a narrower one than that which I believe will soon agitate our minds, and make of the present question a mere detail. The broader question will involve new adjustments along the whole line of primary and secondary education, and, if solved in the way I apprehend, will bring joy or distress to each one of us according as it finds us with our lamps filled or empty.

What, then, is my answer to this question? With an inward protest against further patching of our school curriculum, yet bound to believe that a neatly inserted patch is preferable to a conspicuous hole in the coat we are forced to wear, I answer with a confidence born of conviction, that we should teach in our grammar schools as at present organized, Latin, algebra and geometry, — or better, Latin, geometry and algebra. In the good time coming these studies will be taught in these schools, together with one modern language, one or two natural sciences at least, in addition to music, drawing, geography, arithmetic and other studies now taught. This will come when the wise men revising our courses of studies from kindergarten to university shall mould them into a consistent, rational, progressive whole, and strong men shall enforce the wise men's work.

We need not go far for the reasons in theory and fact that substantiate this conviction. At any given period in their school-life, the dominant faculties of the children should be fed and stimulated with appropriate studies, and the latent ones developed each in its due order of time. If we fail to take advantage of the order of natural development, we waste our energies and worse than waste the child's energies. If, for example, we undertake to force the reasoning faculty of a young child by rigid arithmetical analysis, or geometrical demonstration, the most casual investigation will show us that the child, properly and promptly, has circumvented us, and has brought to bear upon our problems his most efficient faculty — that of memory. On the other hand, if we permit a pupil of advanced years to memorize a book of geometry, she will take her revenge upon us by demonstrating to us, after her long vacation, her entire ignorance of geometry. Natural sciences afford young children opportunities for cultivating the power of exact observation, and for storing up in active memories a wealth of facts which can be used in due time to develop higher powers of the mind. Languages, living and dead, supply abundant material suited to the requirements of pupils while advancing in years. Mathematics furnishes a drill and a discipline unequalled and easily adapted to children of all ages. Why then leave the study of botany, geometry, French, Latin, to be begun in the high school, where pupils by reason of their age are less fitted for the most efficient study of these subjects by the most rational methods? High school pupils demand reasons, classifications, general rules, and get them from insufficient evidence, or take them upon authority. If permitted, they go from the general to the special, because the reverse at their age is tedious. They have passed the age when they can reverse the process without conscious effort.

But I must resist the inclination to dwell upon general principles, or general platitudes, as some may prefer to call them, and address myself to a brief consideration, or rather statement, of the facts to be observed about our grammar schools. If my statement of the facts be accepted, then I have to my mind answered the question proposed.

The first fact I observe, and one that cannot but be of fundamental importance in a rational discussion of a school curriculum, is this: — In our grammar school the average time for graduation is at the close of the ninth year of schooling, and at the average age of a little more than fifteen years.

Second, a considerable number of the graduates of every good grammar school enter the high school.

Third, the grammar school graduate of to-day at fifteen years of age has spent many years upon arithmetic, geography, United States history, reading, penmanship, geography, music and drawing, and English under the name of English Grammar, or Language. As I am now dealing exclusively with grammar school graduates' intellectual outfit, I make no reference to the incidental training of the schools in many directions. All that will continue in the good time coming, as well as in the good time to be superseded. What that intellectual outfit is, I need not rehearse. It is little enough to show for nine years' work.

Fourth, I observe that the average grammar school pupil passes the glorious days of his boyhood with eyes shut, and kept shut so far as his school studies are concerned, to external nature and her revelations, — or if not shut altogether, vouchsafed but occasional glimpses of what others see and feel, not taught to see and feel for himself. He is rapidly leaving behind him, too, the days when he can most easily and joyously learn a living foreign language or acquire the rudiments of the Latin tongue, — the language preeminent whether for direct practical value or for mental discipline. Geometry, in its practical aspects, has not fascinated his imagination, or made a beginning of its unsurpassed training in "the habit of exact thought." The mysteries of algebra have not begun, as yet, to satisfy his dawning need of generalizations and formulæ with which to relieve the increasing demands upon his crowded memory.

Fifth, it is evident that the boys and girls who enter the high schools at fifteen and sixteen cannot graduate for business, for college, or for life before they are nineteen and twenty years of age. That this is unduly late, whether for business, or for college, cannot be controverted, and the small classes that graduate from our high schools, and the large numbers in the aggregate who enter professional schools direct from secondary schools are in evidence to show how the pupils and their parents act.

I end here this statement of relevant facts with no pretence of having exhausted the armory, and close my presentation of this question with a few affirmations, which I believe to be defensible.

First, a public school system is seriously defective that does not, like a ladder, rest on the nursery, and reach to the university.

Second, the average graduate from our high schools should not exceed in age eighteen years, whatever his destination.

Third, there exists a gap, a great gulf, between the grammar and high schools as constituted to-day. The excellent primary schools lead naturally to the grammar schools. When pupils leave the grammar schools, however, they cast off all their studies of the past, as if they were worn-out jackets from which they have got all they need. Traditions and methods go with the studies, and a new life begins, quite unrelated to the past. My complaint and affirmation is that this is all too abrupt.

Fourth, whatever lines of studies can be pursued profitably in the high schools can be studied successfully in their rudiments in the grammar schools.

Fifth, the courses of studies in the grammar schools should be arranged with regard to the half of every class which constitutes a first section, and whose members expect to continue their education beyond the grammar school.

Sixth, under our present order of studies, the best half of every class loses in intellectual advancement the value of one or two years (two, I believe), and loses them irrevocably. Compare the knowledge of arithmetic and geography of a bright pupil of thirteen with that of a graduate of fifteen or sixteen. I venture to affirm that the boy of thirteen knows enough for all practical purposes, and if the boy of fifteen knows more than the boy of thirteen does, his additional knowledge of the subject is of the kind he will speedily forget through disuse or from lack of comprehension.

Lastly, it is expedient to teach Latin, geometry, algebra, in the grammar schools. It can be done successfully, and is being done in the eighth and ninth years of school life in this state. When our boys and girls shall come to the high school with at least two years of Latin, one or two years of the right kind of geometry, with much practical and ready knowledge of the facts of botany at least, of the sciences, and I trust in the good times coming with one modern language, taught as it can be taught only to young children, then the high school can shorten its course by one year and send its boys and girls at a suitable age, with a profounder education than now, to business, to the homes, and to all the higher institutions of learning. Last autumn President Eliot put his finger, perhaps I should say his keen eye, on the spot that is weak in our system. We did not like it, I know; but we were hit fair — if not quite fairly in all respects.

My last suggestion is this. If such work as I have indicated is to be done in our schools, it must be done in the grammar schools.

There are several other very good reasons highly complimentary to our efficient grammar school teachers, but the one I shall name is a potent one, — the tax-payer's reason. The work can be done more cheaply there, and just as efficiently. Our high school houses now are so crowded in most cities that the committees, and the public generally, regard with great complacency the present order of things which brings about so marked a limitation of the numbers applying for admission. In the good time coming there will be little or no real distinction between high and grammar school studies. What differences exist will be based more upon rational differences of methods and scope, suited to the different ages of the pupils, and far less upon the subjects taught.

AN EXAMINATION OF THE CRITICISMS ON THE HERALD PRIZE ESSAYS.[*]

SAMUEL W. MENDUM, WOBURN HIGH SCHOOL.

THE result of the contest for the scholarships so generously offered by the Boston Herald seems to have been disappointing, both to those who examined the two hundred and twenty compositions presented, and to the editor of the Herald himself. The disappointment, it ought to be said, is by no means confined to the originators of the contest, but many other newspapers have concurred with the Herald in its criticism. The opinion of the Herald, however, fairly embodies all the objections urged, and to this I shall largely confine myself. From an editorial in the Herald of July 7th, I take the following: "Those who have acted as judges in the Herald scholarships contest state that they have been disappointed in finding that out of two hundred and twenty competitors only a small number have shown that they possess the ability to freely and simply express their thoughts in written words. * * * * It seems evident —

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[*] A paper read at the meeting of the Classical and High School Teachers' Association, April 3, 1891. See page 208.

and the Herald scholarships will not have attained their purpose if this is not made plain — that a radical change should be made in the methods now employed of teaching English composition in our high schools. * * * * As it is, one is forced to believe that all but a very few of the large number of those who this year graduated from the schools of New England do not know how to write in an unaffected manner and have but a superficial knowledge of the great authors to whose works they have devoted months, and, perhaps, years of study."

Here, then, is a direct charge made by one of the leading newspapers in New England, and it certainly should not pass unnoticed.

I think my fellow-teachers will agree with me when I say that we are very glad that the Herald made such a magnificent offer, and, after finding its hopes disappointed, so frankly criticised the work of our schools, for we can be sure that the Herald is interested with us in securing better results in English composition. Criticism is an element of progress. It stirs the fires of activity and prevents indifference and satisfaction with things as they are from stifling the flames. Let us cross swords with the Herald, then, in friendly controversy, feeling that, as we thrust and parry, the result cannot be other than beneficial in securing the end we strive for, namely, a higher standard of English composition in our schools.

My remarks upon this subject may be grouped under three heads. First: — Did the Herald expect too much? Second:— Ought a *radical* change in our methods of teaching English composition to be made? Third: — Are there any obstacles which prevent our teachers from realizing the ideal sought?

To justify an affirmative answer to the question, "Did the Herald expect too much?" is not easy, for immediately it will be asked if it is unreasonable to expect that a member of the graduating class of our high schools should be able to express himself in clear and simple language. It certainly is not, and it is only because the realization of the theory is modified by the conditions that confront us at the present time that the Herald may be said to have been too hopeful.

The systematic study of English in our schools is of comparatively recent origin. According to Professor Hill, Harvard College, which certainly may be called a progressive institution, never held an examination in English till 1873. At that time there was not in either school or college the systematic study of English that we see to-day. Hardly have we ceased to hear the pleas of the advocates of more English in our colleges. The secondary schools have readily adapted themselves to the advances made in our colleges, and one does not need to look far back to find wonderful changes for the better in the English courses of study in our schools. There has not, however, been sufficient time in which to realize the ideal hoped for. The editor of the Herald might have prepared himself for his disappointment by reading Professor Hill's book on *Our English*. In the chapter on "English in Schools," Professor Briggs is quoted as saying: "Few [of the examination books] were remarkably good, and few extraordinarily bad; a tedious mediocrity was everywhere." And Professor Hill adds: "It is this tedious mediocrity which has amazed me year after year. In spelling, punctuation, and grammar some of the books are a great deal worse than the mass, and some a little better; but in other respects there is a dead level, rarely varied by a fresh thought or an individual expression."

These statements, doleful as they are, are true, but I know that Professor Hill sees no ground for discouragement. That our pupils have not yet attained a high standard of excellence in English composition is no proof that encouraging progress has not been made. I am quite sure that an inspection of the courses of English and the methods of teaching it now in vogue in our high schools would convince the editor of the Herald that we are not going backward, but, on the contrary, have made material progress. I venture the assertion that the composite composition of the graduating class of our high schools to-day is superior to the composition written twenty years ago. Let me assure the Herald, however, that we are not satisfied with our present work, but, as the years go on, hope to reach a far higher standard.

An examination of the subjects presented ought to be made. These were as follows: —

1. Shakespeare: — Supposed speech of Cassius at Cæsar's funeral.

2. Shakespeare: — The story of "Midsummer Night's Dream."

[To be given in full with comments of the writer's own.]

3. Coleridge: — Characteristics of the poem of "The Ancient Mariner."

[In what respects is it unique among poems of the same imaginative class? Some of the reasons for its continued popularity. Illustrative quotations to be given when practicable.]

4. Thackeray: — English life and manners in the eighteenth century, as shown in Thackeray's "English Humorists."

5. Scott: — Outline of the story of "Quentin Durward."

6. Scott: — Character of Louis XI., as represented by Scott.

7. Hawthorne: — Character of Judge Pyncheon, in "The House of the Seven Gables."

8. Hawthorne: — Character of Hepzibah, in "The House of the Seven Gables."

9. Hawthorne: — The hens, in the story of "The House of the Seven Gables."

10. Macaulay: — The character of Lord Clive, as shown in Macaulay's essay.

11. Macaulay: — Rise of the English power in India in the 18th century.

12. In general: — The use and influence of the supernatural characters in literature.

[Familiarity must be shown with "Midsummer Night's Dream," "Julius Cæsar," and "The Ancient Mariner"; but references and allusions may be made to the writings of any age or country.]

Those subjects which call for a narrative account or even a description of character are quite within the scope of the average high school graduate working under a time limit. If those who attempted narrative accounts failed to tell their story in clear and simple language, there is cause for regret. I believe this can be done by our high school graduates, for more scholars pass than fail in their entrance examinations in English for college, despite Professor Hill's doleful estimate of their work, and I cannot think that our New England colleges would pass inferior work. We expect nothing brilliant in a narrative account, and I think the very magnificence of the Herald's offer impaired the power of the competitors to be natural. They, no doubt, felt that some heroic effort must be made if they would win the prize. I think the tendency to drop into poetry so generally noticed can be explained in this way. In my own experience in correcting compositions I have not noticed any marked inclination to make rhyme. I am interested to know if other teachers have had a different experience.

The subject, "Supposed Speech of Cassius at Cæsar's funeral," was evidently the one most likely to receive a prize if anything like a brilliant and original paper had been presented on that topic. There is nothing commonplace about this subject and it is attractive in its novelty and the opportunity presented for the inventive faculty to display itself. It is not surprising that no paper of sufficient merit to win a prize was presented. The subject is altogether too difficult for a child to deal with in three hours. Shakespeare himself, skilled workman that he was, probably spent many more than three hours in writing that masterpiece of persuasive eloquence, the funeral oration of Anthony, and I incline to the belief that, were the great playwright alive today, he would quickly refuse to enter into a contract with an impatient syndicate to deliver a funeral oration of Cassius in three hours from the signing of the articles.

Yet it is not impossible to get a good composition on this subject if time enough be given, and the pupil be not subjected to the mental strain caused by the possibility of six hundred dollars. This subject was given as one of three to the graduating class of the Woburn High School. I ask permission to read the first composition received. No changes whatever have been made.

THE SUPPOSED SPEECH OF CASSIUS OVER THE DEAD BODY OF CÆSAR.

Friends, Romans, and Fellow-citizens: You have just listened to Brutus eloquent speech, and Anthony's touching eulogy on Cæsar. Let me entreat your patience a little longer to hear plain Cassius speak. I see that you all are deeply moved by what Mark Anthony has said, and believe undue injustice has been done this "*Great* and *noble* Cæsar," as Anthony calls him. But if you only knew half of the base deeds and crimes, this Cæsar has committed in Rome's name, you would be the first to call him "*Traitor*."

He was indeed Anthony's friend at his death, but would he have remained so? He was once my friend, but how fickle did he prove! Well do I remember, as many of you can, when his love grew cold. As my influence waxed great, so did his hate; he spurned me and finally put me down. All this, your *great* Cæsar did; but no more of this, for it it was not for the avenging of my own grievances, that I did the deed, but for Rome's safety and your *liberty*.

Anthony reminded you of Cæsar's great conquests, and of the money he brought home to your treasury. He perhaps forgot to tell you, that it was this same Cæsar, who emptied it for you. It is true, he left you large sums in his will, which Anthony was so kind as to read to you. I tell you, it was *easy* for Cæsar to *write* the will, and he knew the effect it would have on you; but where is the money to back the words? You do not know and never will. As to his conquests, they were for his own glory, and he little cared whether they benefitted Rome or not. Rome has many a man equal to him in physical strength and in mental qualities, who, if given a chance, would easily prove a far *greater* conqueror.

Anthony also said, that Cæsar was not ambitious. I tell you, nevertheless, that he was, and which of us knows best? From his youth up, this poor, weak Cæsar has gloried in conquest, and has sought many base ways to gain popularity. He became consul, but there were others, so he was not content until they were thrust aside. This accomplished, he did not rest, but aimed at a throne, which you degenerate Romans would willingly have given him.

Oh! how easily he won you! Could you not see, that he was using you to glorify himself? You did not try, but believed him generous and liberal, because he gave you many feasts and sports; forgetting, that the enormous sums which he spent on them, were paid by you in excessive taxes. You gave him honor after honor, and at last would have made this tyrant your king if the conspirators, of whom, Brutus and I are chief, had not killed this very mortal god. Have you lost all Roman virtue, and is this the way you preserve that liberty which your fathers struggled so hard for? Arouse! and show yourselves Romans. Stand by us and show yourselves grateful for the service which saved you from slavery and a tyrant's power. Bury this Cæsar, and never let his name be spoken, except as that of a traitor and tyrant.

I have not read this composition because it is thought brilliant enough to deserve a prize, but because it satisfies, I think, the conditions which the Herald seems to require, — "ability to freely and simply express thoughts in written words."

The last subject, "The Use and Influence of Supernatural Characters in Literature," was clearly unreasonable. How could these innocent mental featherweights under twenty years of age be expected to treat in three hours a topic more suited to the deliberations of a society of idealistic novelists? Yet the examiner with refreshing candor complains that a composition presented on this subject "shows clearly what most of the other compositions on this subject show to some extent, a failure to comprehend the subject. It is the most bewildering of the whole two hundred." Is there a teacher present who would have predicted any other result? It was clearly a waste of time for the examiners to read compositions on this subject at all, if any prize work was expected.

We teachers regret exceedingly that the originators of this contest were so disappointed, for had their expectations been realized, they might have been prompted to continue the plan and thus work untold benefit to the cause of good English in the schools.

Ought a *radical* change to be made in the methods now employed of teaching English composition in our high schools? The Herald, without other investigation apparently, bases its recommendation for a change on the result of the test. I must repeat that, in view of the recent origin of the reform in English, the Herald expected too much, and that an investigation of methods now in vogue would show that we are on the right track. A more logical conclusion would have been drawn from a comparison of methods and results now, and methods and results ten or twenty years ago.

I believe no *radical* change is needed. That was made when colleges awoke to the necessities of more attention to English. What change is made now ought to be of degree rather than of kind. The newspapers criticise our methods without knowing, evidently, what they are. The Boston Post even goes so far as to reminds us that " it is quite true, too, that ample and systematic instruction in writing English has a place in the curriculum of our schools." The Post and other papers seem not to understand not only that ample instruction in English is given now in our high scools, but that it is becoming more ample and more systematic every year. It may be well to state briefly just what is done in English, both as to quantity and to systematic instruction in an average Massachusetts high school.

It is because I think my own school is at least average that I ask your attention to the course of study in English in the Woburn high school.

During the entire first and second years the study of American authors, Whittier, Longfellow, Hawthorne, Irving, and Cooper is pursued, the common rules of rhetoric are learned, and considerable time devoted to the correction of errors in English. Selections from authors are read and the pupils are required to reproduce the thoughts in original language. Not less than two compositions a week are required on such subjects as " How I spent Vacation," " A Journey to the Moon," " A Trip to the Country." Stories from memory, biographical sketches and mythological stories are also required. The last two are studied out of school and written upon in the class from memory. The time given is four recitations a week for the two years. The second year is a continuation of the work of the first. Compositions on set topics are given, and these topics are such as are related to the studies they are pursuing. For instance, I have given to a Cæsar class " Julius Cæsar as General and Statesman." To a physics class, " The Progress of Electricity." More critical work is done with the poets in this year, and Franklin, Webster, Curtis, Howells, the historians, and other representative names are studied in addition.

The third year is devoted to English authors. The pupils read selections from different writers, study the style, time in which the author lived, circumstances under which the work was written, and finally the life of the author. They write in their own language the stories of what they have read and commit to memory many quotations. In addition, six compositions on set topics are required. For the work of this year in English five recitations a week are assigned.

The last year is devoted to rhetoric and the critical study of Shakespeare and Milton. Three recitations each week are given to the English and two to the rhetoric. The members of the college class take the rhetoric, but devote their spare time to the books specially assigned by the colleges, which last year were identical with those assigned by the Herald. In the rhetoric the principles are studied and careful attention is paid to correcting bad sentences. Six compositions are required from the regular class, and ten from the college class.

In our school, then, eighteen recitations a week are given to the one study of English, and the methods of instruction are in line with those suggested by the most progressive college professors of the day. Nor is this all. The effects of the reform are felt in other classes. Never before has the topical method of teaching history been so vigorously pursued, and this method is applied in other branches where it can be used. I can remember learning paragraph after paragraph of Anderson's History by heart and having no more regard for the meaning than if I were a parrot. This method is old-fashioned now. Scholars are now required to investigate for themselves and to tell the result of their investigation in their own language. In teaching Civil Government it is my custom to assign special topics. In taking a class in this study I met scholars whom I had not heard for two years. In the mean time they had had constant training in English and in using their own words in answering questions. I was much gratified to observe the general improvement that had been made. I had assigned one of the girls the task of finding out all about juries. I am positive that the proficiency which she displayed in telling the class about juries would not have been shown in a pupil ten years ago.

The reform has made itself felt in the dead languages. In this school ten years ago, we were allowed to say: "These things being known, Cæsar led his troops across the Rhine." Today the literal rendering of the Latin ablative absolute is pretty generally discouraged and there are teachers who refuse to allow a Latin word to be translated by its English derivative. My good teacher, Mr.

Chadwick, has kept in the van in the reform and told me not long since that his students were writing a translation of Cicero's oration for Archias, with special reference to securing idiomatic and effective English.

Are we not, then, on the right road, and is not a better application of the methods now in vogue needed rather than a *radical* change? I trust the Herald will be patient with us and feel something of the same spirit which prompted the sympathetic westerner when he placed in front of the church organ a placard bearing these words: "Don't shoot the organist. He is doing the best he can."

What are the obstacles in the way of attaining the ideal expected of us? They are three in number: — the home life of the pupil, newspaper English, and the teachers themselves. The home training of the pupil is either for or against his success in writing and speaking. It will be generally admitted, I think, that the character of the English in the average American home is not up to a desirable standard. The winner of the first scholarship in the Herald contest came from a cultured home. The mother and sister had been teachers, and the father was the village doctor. The winner of the second scholarship was the son of a clergyman in the city of Brockton. It is fair to assume that these pupils had advantages not enjoyed by those whose parents had been less liberally educated. The majority of our pupils are not the children of professional men, and come to us with the faults in speech to which they are accustomed in their home life. A boy in my school says: "I didn't have no time." He knows better, and so confesses when corrected, yet I doubt not that he says it continually out of school because he hears it so often. In fact, bad English is so comfortable that many pupils, when they speak good English, act like Joe Gargery in his Sunday clothes and feel that they are being looked at.

I come to speak of newspaper English with fear and trembling, for whether it be true of women or not, it certainly is true that the newspaper can have the last word in the argument. I demand, however, fair play. The Herald began it, and I maintain my right to hit back. I propose to make an assertion which I hope the Herald will be able to refute. If we are to follow the precepts of the best authorities on rhetoric and the recommendations of the Herald itself, then it certainly is true that the English that is presented in the news columns of our daily papers is an obstacle to the best attainments in English composition. It is needless to discuss this point at length. Every teacher of rhetoric knows that he cannot recommend his pupils to read the news columns of the majority of our newspapers in order to find pure English. One has only to read in Professor Hill's book the chapter on "English in newspapers and novels" to find samples of violations of good use which he can duplicate every day in his daily paper.

I am not opposed to the newspaper, but on the contrary, urge my pupils to read it constantly and to make a judicious selection of the matter. I especially urge them to read the editorial columns, for there they will find not only the best English in the paper, but the best thought. I believe that the style of the editorial columns of our leading dailies is commendable. I have nothing to say as to the business methods of the newspapers. Their proprietors recognize the expediency of offering the kind of news adapted to their readers. If the society woman likes to be spoken of as a "ravishing symphony in white, pale green, and gold," why should the puritanical principles of rhetoric be regarded? If, however, the newspapers have a sincere desire to help on the cause of good English, if they wish to coöperate with us in the effort to teach our scholars "to freely and simply express their thoughts in written words," as the Herald says, then let the news column be well guarded.

A third obstacle is often found in the school teacher himself. This is the age of specialism. One fits himself to be a teacher of mathematics, another to teach chemistry. Those branches not having a direct bearing upon the work are left untouched. As a consequence we have many teachers wonderfully well equipped in their specialties, who make failures as instructors. I well remember a teacher in mathematics, under whose instruction I sat, for whose knowledge I had the profoundest respect, but whose ability to impart the truths he knew amounted to nothing.

I have listened in despair to the abortive attempts of a professor of chemistry, a man of undoubted authority, to conduct a lecture in that subject. He seemed utterly unable to construct a smooth sentence of any length. There is too little attention paid to the art of expression. I have listened to teachers deliver papers in convention with their heads buried in their notes and speaking so low as not to be heard half across the room. There is much room for improvement among our teachers themselves in the matter of careful expression, especially among those who teach subjects not immediately connected with language.

THE CLASSICAL AND HIGH SCHOOL TEACHERS.

THE annual meeting of the Massachusetts Association of Classical and High School Teachers was held in the Boston Latin School, April 3rd and 4th. The occasion was one of marked interest. The programme as sent out by the committee was not specially attractive, and the weather was such as still further to discourage all except those who regarded attendance as a matter of duty. The realization of the programme, however, was better than its promise. There was no time during the sessions of Friday when one was inclined to let his attention flag. The papers and discussions were not only profitable to the practical teacher, but of moment to all who are accustomed to fix their regard upon the educational field from whatever point of view. The talk was vigorous and straight to the point, and there were no delays. During the Saturday morning session the interest of the preceding day was hardly sustained. The management could not be said to be fortunate in the selection of Mr. Billings to discuss President Eliot's talk at Worcester, unless, as possibly was the case, they intended by the weakness of the answer to bring out the strength of President Eliot's criticism. On the whole the meeting counts as one of the best which the association has ever held.

Mr. Mowry's paper was conceived in an excellent spirit, and received marked attention. To an inherited aptitude for such studies he adds the successful experience of the class-room. Mr. Tetlow is well known as a student and teacher in this same field and his contribution to the discussion was, as always, thoughtful and pertinent. Mr. Mendum's paper we print in full in this number. The discussion which followed it served to bring out what seems to us the very vital fact that the report of the judges in the Herald contest was not written by either one of the gentlemen who were advertised as judges, but by a Harvard senior who had examined all the compositions. Apparently the Herald published to the world as the opinion of the judges statements to which one at least of the judges seems not to have agreed. Through this report, written by a young man whose name is not to be found in the published list of judges, those gentlemen are made to express their almost absolute disappointment, a view in which it now appears that one of them was far from concurring. It was certainly unfortunate that the statement was given to the world that the report of the judges was "drawn up by one of their number."

Mr. Thurber's discussion of Mr. Mendum's paper received such attention as is given to few speakers. Those who have read his recent articles on English in THE ACADEMY — and all live English teachers have read them — can easily understand the deference paid to him by his fellow teachers.

Mr. Collar's remarks were vigorous, pointed and consecutive. They showed careful preparation, and were much more effective than the reading of a formal paper would have been. They were not, however, entirely free from a certain severity which the subject hardly demanded and which was made still more apparent in the discussion which followed. President Eliot, in this as well as in the discussion of Saturday morning, appeared completely master of himself as well as of the discussion. Whatever may be thought of his opinions and views of educational subjects, the head of Harvard College offers a model of dignified, courteous, and cogent discussion. His powers of self restraint were specially conspicuous in the discussion of Mr. Billings' paper. Those who observed closely what he said at the Worcester meeting, are well aware that it was not the grammar schools of Cambridge which he had selected for his investigation. His quiet refusal to deny the assumption which his critics have made without proper warrant is possibly a little exasperating, but none the less admirable.

Mr. Bradbury's discussion was a model in its way. He had the materials for the discussion well in hand and presented the case without personalities, having in view apparently only the merits of the question. The result was naturally the strongest and most effective presentation possible. Whether or not one agrees with the conclusions reached, the method pursued deserves the highest praise. There was a flavor of bonhomie in all he said, and a quiet humor kept cropping out which not only pleased all who listened, but indicated the strength of the cause he was defending. Showing the old time catalogue of Harvard — a thin pamphlet in blue paper — in contrast with the voluminous cloth bound catalogue of to-day was an object lesson even for dullards, and when he produced the geometry which was formerly prescribed for admission at Harvard, and read from the preface that it was intended for the author's children aged five and seven years, the laugh that went round showed how well he had carried his hearers with him.

Mr. Billings' paper on the actual work accomplished in the average Massachusetts grammar school is printed in full in the New England *Journal of Education* for April 9th. Any one therefore who wishes can read it and judge for himself. It seems to us hardly happy in its tone, and entirely inadequate in its treatment.

The social feature which, in the earlier meeting of the Association was conspicuous by its absence, has been introduced to a considerable extent in the last two meetings. The collation which was served in one of the rooms of the building Friday noon, was not simply a convenience from the physical point of view, but was a decided addition to the meeting.

President MacDonald opened the meeting with brief suggestions as to what to-day should be the aim of the schools, namely, that they are not for general training but for intellectual culture, and therefore that we should seek concentration and the better doing of work already in the curriculum, rather than the introduction of new work. On the subject of teaching Latin his suggestions were rather startling. "Make Latin a living language, *lingua* not *scripta*. Teach it as a language, not as mere material for mechanical drill. Speak Latin in your classes. Accustom students to the constructions, inflections, and Latin order in sentences by making them hear as well as see them. Even if they themselves do not at first speak in Latin, they advance twice as rapidly when hearing Latin phrases from the teacher's lips as when the teaching is done in English. All that one needs to say in the class room can be expressed in Latin. The one serious objection to this practice in classes preparing for college is the matter of pronunciation. Pupils accustomed only to read Latin in either pronunciation find it easier to change than pupils who have also been hearing it. A committee might be appointed to decide upon a uniform pronunciation."

In the half hour left vacant for discussing special topics which any member might wish to introduce, Mr. Parmenter referred to the demand for simple appliances for experimental physics, and explained a device of his own for illustrating the laws of reflection of light. It consists of a piece of mirror held in vertical position by means of a block with a groove in the side in which the edge of the glass may slide. The reflector is placed on a sheet of paper, a point is located by means of a pin, and then sighting over a rule, lines are drawn to show that from whatever point the eye observes, the point at which the pin is reflected in the glass is invariable.

Mr. A. W. Mowry began his paper with the statement that the reason why efforts in the cause of education in New England are not producing the expected results lies in the fact that too little attention is paid in the schools to the subject of Civil Government as a means of educating good citizens. In the Salem High School, Mr. Mowry follows the historical order in developing the various phases of government, and the study is treated in intimate relation with United States History. A single text-book is found insufficient, and the system of topics with references for reading is used.

In order to understand the constitution it is necessary to know the conditions under which it was formed, and therefore the gradual development of our government through the colonial period is thoroughly considered. The New England town meeting is specially helpful to an understanding of the principles which underlie our national life. In the town meeting the citizen comes into the closest relations with the government, and therefore the town boy, as more familiar with this meeting, has an advantage over the city boy. A town meeting may be easily organized in the civil government class. All the officers should be elected from the pupils, all the forms should be carried out, and various matters of business should be brought before the meeting. When the school board is elected, it gives opportunity for the teacher to speak of education in general, its aims, methods, and results.

Later, city government is studied, charters and ordinances being made the basis of the work. When the time for regular elections comes, the class votes. After election, they bring newspapers to school, reading and discussing the election returns. In this way two ends are gained; pupils learn how to read the newspapers, and prominent men and policies become familiar and interesting to them. Current events are studied for their political significance. For this sort of newspaper work, "Public Opinion" is most helpful in counteracting partisan tendencies.

The constitution is made the foundation of the study of state government. A senate and a house of representatives are elected among the pupils, bills are brought up, passed, and presented to the governor in the person of the teacher. Later, the class visits the State House and is present at a session of the legislature.

For the study of the development of our national government various notable landmarks in our political history are assigned as topics, such as Hamilton's Financial Measures, Treaties with France, Washington's Farewell Address, Virginia and Kentucky Resolutions, Purchase of Louisiana, Causes of War of 1812, Tariffs of 1824, 1828, 1832, and 1833, The Monroe Compact, Mexican War, Kansas and Nebraska Act, New Party formed in 1858, Secession Movement, Lincoln's Administration, Tenure of Office Act, Impeachment of Johnson.

Mr. Mowry advocated very little memorizing of the Constitution. With the exception of the Preamble, it was taken up in groups of clauses which were assigned to individual pupils and on which they presented recitations specially prepared.

Mr. Mowry closed by saying that he had not found his pupils harmed by the diversity of topics and the extent of ground covered, and they did not imagine that they had mastered the whole subject of Civil Government. Further, he had found that they gained a conception of the fact that they owe something to the government, past, present, and future, and he considered that if a teacher can succeed in making good citizens of his pupils he need ask nothing more.

In calling for the discussion of the paper, the President noted the fact that its brevity left ample time for discussion, a virtue conspicuous because so often absent from papers read on similar occasions.

Mr. Goodrich, principal of the Salem High School, spoke of the class of pupils who come under Mr. Mowry's teaching, and testified to the excellent results which had been accomplished. Many high school pupils are without ambition, and make the schools simply a waiting place till they can get into business. Boys of this class come more quickly to the practical application of the study of civil government than do those who go on to college. From them come men who aspire to political offices, who become councilmen and school committee men, and to such boys this training in school may be made of lasting value.

In reply to a question by Mr. Farnsworth, of Brookline, Mr. Mowry stated that he would advocate the study of political economy in connection with civil government.

Dr. W. A. Mowry spoke of the necessity of making this topic one of vital interest in the school, of stimulating public sentiment regarding its importance, and instructing the youth of the country in the principles of republican government in order to secure national safety.

Mr. Tetlow expressed his interest in the paper and his agreement to the propositions set forth. He thought, however, the study of the details of the postal department hardly necessary, since the few who will need information can easily secure it from the printed regulations issued by the post-offices. He attached less importance to the use of the newspaper in schools than do many teachers. The newspaper is so universal an educator that it can be trusted to take care of itself. He believed that it was well to commit to memory certain clauses of the Constitution, the actual phraseology being of importance. He emphasized what Dr. Mowry had already said of the importance of teaching the principles of our government to the young. As to methods, he pays little attention to the history of the colonies except Plymouth and Massachusetts Bay, which illustrate sufficiently the way in which the government grew up. As special days in the political calendar come round, he teaches the subject suggested by the day.

Mr. Hartwell thought that to carry out so elaborate a method as Mr. Mowry's was impossible in small classes, yet he believed it necessary to make civil government a live study. He had found historical geography to be a helpful accessory, and uses in his class maps showing the growth of the country. As to newspapers, this speaker was more emphatic than Mr. Tetlow, saying that he does not dare bring the newspaper into the school, and indeed forbids its use.

Mr. Mendum's paper will be found on page 198 of this number.

Mr. Prince, of Newtonville, thought language should be the central point of teaching, language in connection with thought. Thought unless expressed fails to be effective. He does not believe in language books. He had a few chapters of a book on composition in manuscript when he went abroad. After seeing the work done in foreign schools, he came home and burned his book. In Germany every lesson is a language lesson. Each pupil keeps a book for recording the facts of language acquired in each recitation whatever the subject. We may be upon the right track in our teaching, but there is needed a reform of reform. We should set our faces against the flood of books which are usurping the teacher's place in the school. And we should abandon the practice of giving pupils an outline upon the subjects upon which they are required to write.

Mr. Thurber spoke warmly in praise of Mr. Mendum's paper. He had listened to it with great interest and complete sympathy. He had, however, taken no interest in the Herald contest. The list of topics assigned was such as he would not think of giving to his classes. There was one point in which he did not agree with Mr. Mendum. He was not so sure that there has been an improvement in composition writing during the past twenty years. He had recently come upon a series of compositions written forty years ago by a girl then at the age of his present pupils. He had found these compositions neither better nor worse than those handed to him daily. They were very much like those of to-day, except that they were tinged with the melancholy which characterized so much of the school writing of forty years ago. As to allowing a pupil to choose such a subject as Milton, for instance, he saw no objection, providing the pupil knew about Milton from various sources, and from various points of view, not from a mere " reading up." Pupils write as well as they think, and think as well as they are old enough to think. We cannot expect much from an immature mind. Mr. Prince is right in saying that the main difficulty with which we have to contend is found in books on composition. With all respect to his good friends the publishers, Mr. Thurber wished their energies might be turned in other directions; it often occurs that he is asked to examine books on composition intended for publication, which he always tries to avoid doing, since he feels those very books to be such an obstacle to good teaching. He even doubts the value of a text-book on rhetoric.

Mr. Tetlow suggested what he called the " laboratory method " in English composition, that is that the teacher write occasionally upon the topics given to his pupils and read his own essay in the class. He had found this practice stimulating, as was also the custom of having the pupils' best compositions read to the class.

Mr. Ladd, of the Chauncy Hall School, who had been one of the judges in the Herald prize contest, spoke concerning his share in the matter. He said that in selecting the topics, he had wished to bring the subject of composition into relation with the literature the pupils had read. He considered the topics " Story of Quentin Durward" and "Story of Midsummer Night's Dream," very easy, and had purposely chosen three very hard ones, "The Hens" in the story of the House of Seven Gables, "The Rime of the Ancient Mariner," and "The Use and Influence of the Supernatural Characters in Literature." He had been much surprised that essays on two of the difficult subjects had taken prizes. The 220 competing essays had first been examined by a "very brilliant young man at Harvard," who had reduced their number to twenty-five which were sent to the other judges. "These were," said Mr. Ladd, "twenty-five essays which any pupil might have been proud to have written." The report of the judges, which had been the motive of Mr. Mendum's paper, had been written by the "brilliant young man at Harvard" who drew his conclusions from the whole mass of evidence. The twenty-five compositions had been read aloud in company by the judges, and also by each judge individually, and the verdict given was unanimous. One of the essays had lost several places on the honor list because of the constant misuse of "shall" and "will." This statement brought out a little questioning whether with the daily usage of the people and of the newspaper, besides the continual misuse in Shakespeare, it is possible for teachers to correct this fault of speech. It was noticeable throughout this discussion that teachers find the slovenly English of the newspapers to be a serious obstacle in the path of English teaching.

The "mediocrity" of the essays was again referred to. It seemed the feeling of the meeting that only mediocrity could be expected, especially under the conditions, and with a prize at stake. It was questioned whether the pupils contesting represented the best students. Mr. Thurber said that in his opinion prizes do not appeal to the best minds, and never call out the leading talent. Being called on again to give what he considers the best line of topics for school composition, Mr. Thurber said that there was not time to go into the question in detail, but that he would say that he had found reporting to be the most useful and successful exercise in composition. He had a secretary appointed for each recitation of every subject, whose sole duty was to take notes on what was said and done. The notes were then to be put into the form of a report, which was most useful in itself, since when read next day in class, it recalled to teacher and pupils what had been done on the day before, and what line of thought had been started which it would be well to continue. It was the best sort of training, teaching the reporter to discriminate as to what was important, requiring clear and concise expression, and doing away with the self-consciousness which is the worst fault of school writing, and which the Herald judges had found specially deserving of condemnation in the competing essays.

Mr. Collar opened the discussion regarding shortening the college course by saying that though he felt himself not entirely prepared for that duty, yet he felt so strongly on the subject that he intended to argue with all his might, and perhaps convince even President Eliot.

While the question of shortening the college course may be said to have two bearings, namely, shortening it in point of time, and reducing the amount required for a degree, the two sides of the question are one. A reduction in either particular involves the other. In discussing the matter we turn naturally to Harvard College as it is from there that the controversy emanated, and the matter had long been talked of there before the recent report was drawn recommending that the course be shortened. By this report the requirements for the bachelor's degree are to be reduced by an eighth or a ninth of the present amount required, and the time is to be lessened by one-half of an academic year. To one who favors the reduction this does not seem much; but it does not in fact fairly represent the amount of change. The logic of circumstances will carry the reduction to one year in time, and to one-fourth of the amount of study now required.

A very important change has been made at Columbia College. The course has practically been shortened by one year; that is, at the end of the third year, the student may confine himself to special studies, and though the first degree is not yet granted at the end of the junior year, that is the logical outcome of the change. President Adams of Cornell is urging with force that it is expedient for a great number of the smaller colleges to cut two years off their course; and while he does not actually say that the degree should be given at the end of two years, yet he suggests that it may be well to recommend that the degree be given "at a modified stage of the course." President Adams wishes that out of 390 colleges, 375 should behead themselves, in order to live a more flourishing life. It is expected that after this briefer course students will go on to the universities, but it is by no means certain that the country college men would be at this extra expense and strain to win the advanced degree, when they could get the bachelor's degree at the end of two years.

The point of view from which Mr. Collar considered the question was that of the secondary schools. He emphasized what he thought a most significant fact, going to show that there is no unity of purpose, no solidarity, of higher education. In the report of the board of managers of Harvard, though the shortening of the course was discountenanced by some of the ablest and most broad-minded men, neither in that report nor in any of the many discussions of the subject had one word been given to the effect of the reduction on the secondary schools. It is impossible that the change should be made without vitally affecting secondary and even elementary schools, — so radical a change must have its effect on the whole field of education. The teachers of the secondary schools get their training from the colleges. The time of the college course cannot be diminished by from a half a year to two years and not affect the teachers of the secondary schools.

Mr. Collar's arguments may be outlined under five heads.

I. It is maintained that if the course is shortened, those preparing to teach will no longer care only for the bachelor's degree, but will go on higher. That this will be the case there are two reasons to doubt. First, there has never been a demand for a degree higher than the bachelor's to qualify for teaching. Advanced degrees have far more significance abroad than here. No people on earth care so little for degrees in themselves as do the Americans. Second, it is not to the pecuniary advantage of one who expects to teach to take the higher degrees. Advanced degrees won have been a positive hindrance to a teacher. They presume a degree of special knowledge which unfits a man for a place in the public schools. There is not room for specialization of teachers in schools where so many subjects are to be taught, and where there are so few teachers for the number of pupils. Americans give weight to a man's having been to college; it is supposed that he is then fitted, without further question, for the position of teacher or of superintendent of schools. Teachers are poor men. Mothers and sisters toil at home that the boy may go to college. The teacher needs to get his education as quickly as possible, that he may be self-supporting. If he can finish his college course in two years, he has every motive to do so.

II. It is claimed the shortening of the course will insure greater earnestness and fidelity during the two years. With this statement the speaker agreed. But as regards the embryo teacher it was an argument of no great weight, since those preparing to be teachers are already the most serious and devoted class of students, and need little additional incentive.

III. There are three factors in education; training, acquisition, and culture. Culture is difficult to define. We can say what it is not better than what it is. It is not training, for a man may accomplish wonderful feats in mathematical work and lack culture. It is not knowledge, for a man may be recognized as a savant and yet have no claim to be called a man of culture. Culture is the outcome of previous training and acquisition, but in culture, more than in either of the other ends of education, time is an indispensable factor. One may set himself to attain in a limited time a certain amount of training or of knowledge, but one cannot so determine with regard to culture. Culture depends upon association. The lack of culture, again is a more serious matter to the teacher, in that his calling is unfavorable to its acquirement. First, because teaching is so absorbing a pursuit that the teacher becomes oblivious to all outside his work. Second, because teachers have to deal with inferior minds, which do not stimulate to continued advance. The teacher, more than the follower of any other profession, is dependent upon his college course for his culture.

IV. Moreover, the loss in acquisition by the teacher, would be profoundly felt. Mr. Collar paused to question whether the schools really do a high work. He referred to Professor Fay's paper, of four years ago, when he undertook to present to his audience some points in which the secondary schools could be bettered. The gist of that writer's thought, based upon the results of his researches among the college professors who receive the pupils from the secondary schools, was that nothing was well done, that all the preparation which students had received varied merely in degree of badness. All the colleges complained that the work of the secondary schools is so poorly done, that they themselves have to do elementary work. These statements were so sweeping and savored so much of the usual style of criticism which secondary teachers are well accustomed to receive from the colleges, that they had been on the whole rather amusing; yet they were in a measure justified. Secondary teachers are deficient in knowledge of the subjects they teach. When in Germany, Mr. Collar had tried to penetrate to the secret of the greater efficiency of the German schools. He had engaged a professor at so much an hour to let himself be "pumped" on the subject of his work. His power seemed above all to lie in his masterful *knowledge*. Teachers here do not have a wide enough grasp of their subjects, a profound enough knowledge. If they had, there would not be this continual questioning as to the best methods. Their own ideas would suggest the methods, which would grow out of their deep knowledge of the subjects. The proposition to reduce the college course in time and in substance strikes the schools where they are weakest. It means that students are to be put into the hands of men and women of less culture and training than those who man the schools to-day. That this could be done and not materially affect the tone of the schools and diminish their present effectiveness is not to be for a moment supposed. It is a truism, but one which teachers cannot too seriously consider, that "as the teacher, so is the school." Teachers should repeat to themselves morning, noon, and night, "as the teacher, so is the school."

V. Even supposing no loss were felt in culture and attainment among teachers, the schools must nevertheless be affected if the colleges lower their standard of ultimate attainment. The proposed change might not lower the college standards on paper, but it would in fact. It is the aim, the ideal, which determines the actual attainment of a man. He may never reach his ideal, yet it is that which draws him to the greatest height he does attain. Lower our aims and ideals, and they will lower us. Further, there is one particular in which the schools would be hurt where Harvard College has previously largely helped them. Teachers owe a debt of gratitude to President Eliot and to Harvard College for the attitude they have taken toward secondary schools. Teachers have often been invited to meet the faculty and talk over admission requirements; individual complaints have always received careful attention. But, what is still more important, Harvard College has held out inducements to the secondary schools to do part of the work of the freshman year. In the speaker's own school, this inducement had had such effect that one quarter of his class are taking an additional course in something. This proportion would increase if the encouragement were still held out and the school were equipped for the extra courses. The effect on the whole school has been apparent, producing a more serious devotion to work, and creating a marked respect among the other pupils for the boys who are taking the extra work. The reduction of the course at Harvard would make these effects nugatory. What other influence could it have on the lower school boy, if Harvard lops off a year of its work, if

Harvard remits more than he would gain by his extra study? The change would make the position of Harvard College illogical. It has offered encouragement to extra work, and now would reverse its policy. "Therefore I am sure it is all a mistake, and that President Eliot cannot be in favor of this change, as has been reported. For though one may sometimes differ with him regarding certain matters of education, (as I myself have sometimes ventured to do), let no man charge President Eliot with occupying an illogical position.

"In conclusion, I want a declaration from this meeting that we teachers think there is no demand that the work of the schools be damnified and degraded, but if the attempt shall be made so to damnify and degrade the work of the schools, we will do our best to prevent it."

Mr. Bradbury was the next speaker. Concerning the age for admission to college, he said: — Our early beliefs settle our opinions for life. A man thinks the way he did a thing is the way everyone should do it. President Eliot entered college at fifteen, and it is but natural that he should think every boy should enter college at that age. I entered college at an age three years greater than that at which he graduated. Therefore it would be natural for me to think that every one should enter college at twenty-two. I will agree to take three years off the age for admission, if President Eliot will put three years on.

We are told that the age for entering college has been increasing. Why not? Compare the requirements of to-day with those for 1870. The comparative sizes of the two catalogues is a fair representation of the difference. (Here the speaker held up the thin blue pamphlet of thirty years ago beside the thick bound volume of to-day.) In Greek prose composition, for instance, we had in 1870 four sentences, with thirteen words translated for the pupil. In 1890, half a page of connected prose, with no helps given. In Latin composition in 1870 we had two sentences with thirty-four words and constructions explained, against a long connected narrative to-day, with not a word explained. Consider how much more training it takes to prepare a boy to translate decently a piece of connected prose than to teach him to put into Latin a few disjointed sentences.

The work in geometry required at Harvard in 1870 was a little book which, as the author stated in the preface, had been compiled as a beginning book for his two children, five and seven years old. Further, French (or German) and physics are so much added outright to the requirements of twenty years ago. The time needed for these extra requirements would amount to three years. That the boys do not enter college three years later than they did in 1870 proves that the efficiency of the schools has increased by so much as the boys lack of being the three years older. Mr. Bradbury read statistics of his own school showing that the age of classes graduating prepared for college has increased very little since 1857. He quoted a saying attributed to Lincoln as indicating his own feeling with regard to the question, " How old should a boy be on entering college." Mr. Lincoln, when asked, " How long should a man's legs be," replied, " Long enough to reach from his body to the ground." Mr. Bradbury believes that a boy should go to college " when he is good and ready." It is brains, not age, which should determine the time of a boy's entrance into college. It is known that the younger boys always do better than the older ones. It is simply because they are the ones who have the brains, their age has nothing to do with it. They had the brains to do a given amount of work in less time.

The tendency to-day is to make the college course more and more elective. A boy of sixteen, seventeen, eighteen, does not know what he wants. The boy, when he enters college, is supposed to be a man. Even a man needs some incentive to keep him at work. Very few boys of sixteen will do their work unless they are called upon to show that they have done it. Therefore, college men should be older now than they were when the study was required.

What is the need of hurrying the men out into the world? No one cares to put himself into the hands of a lawyer or a doctor of less than twenty-six years. An Englishman once said to me, " In America, you are trying to educate the public, and the public does not want to be educated." So in this matter, the public does not want what President Eliot wants. In my own school, I have said to my boys, on entering, " You may take the course in four years instead of in five if you can." Of those who undertake it at the beginning, very few complete it in four years. Parents do not want the children hurried through school. They want them to study music and play tennis. If we change all our ideas for the children and teach them not to play tennis, we can get them into college earlier. There is no harm in President Eliot's *advocating* this measure: but the one way in which the age of admission to college can be reduced, is by putting the requirements for entrance back to where they were in 1870.

Cordial applause greeted President Eliot as he stepped on to the platform. He said that since the whole discussion of the afternoon had centered around Harvard College, he himself would take the liberty of pursuing the matter from the point of view of that institution.

He thanked Mr. Bradbury for the clear picture of the advance in the requirements for admission to Harvard. Besides this there have been two marked changes in educational matters in New England. First, the age of admission to college has increased, and second, there has been a wonderful improvement in the secondary schools. These changes are not confined to New England, but have taken place all over the country during the last thirty years. The improvement may be said to be in a measure due to the colleges, but more to the teachers, who have greatly improved. This indeed, may be due to the colleges, which turn out better teachers.

There has been an increase in the age of admission of about two years. It has been shown and no one has tried to deny it, that the American boy on entering college is inferior, by a year and a half to two years, to the French, or German, or English boy. This is not due to differences of climate or in native ability or in inherited tendencies, but to the system. We must go back to the beginning of the system to find the cause. The secondary schools can help, can apply the remedy, but the fundamental evil lies in the grammar, and even in the primary schools. All Harvard College asks is that the American boy bring at eighteen all he now brings at nineteen. The statistics Mr. Bradbury brought to prove his own position seemed to President Eliot to prove quite contrary facts. Namely, that the public does want the children to get into college sooner. Else why should so large a proportion of Mr. Bradbury's classes try to do the work in four years instead of five? That they failed to carry out their intention, no one who knows Mr. Bradbury can wonder, but that a quarter of all the entering students wished to get into college in four years instead of five, seemed to President Eliot a strong argument in favor of the change he wishes to bring about. Why should the American boy begin later than the youth of any other country to earn his living? It would be more in keeping with the spirit of America for him to begin sooner.

The later entrance into life work of the American boy is to be considered as to its effect on a democratic organization. We all say we believe in democratic principles; yet in reality our social organization is not as democratic as that of other nations. The privilege of higher education here involves the support of a young man by his parents until he is twenty-six years old. This fact tends to limit the advanced education to the well-to-do. More than half of all the Harvard graduates go into the learned professions, while but a moderate percentage go into business.

The right of all men to the higher education is back of the wish to induce all persons to seek to reduce the time required for gaining that education. The shortening of the course at Harvard by a very slight degree is but a small part of the question. It has to do with the whole system of education. The main point I have to make is that it is a matter which affects the whole country, that it is a social and political evil. We should seek to find the cause and apply the remedy. I repeat, I am asking you to try to abate a social and political evil.

President Eliot agreed with much that Mr. Collar said, but not as to the probable effect of the shorter college course on teachers. I should think that one who has been teaching in the schools of New England for so many years would be sure that Harvard College wants better and more learned men in the schools, not less learned. Whatever plan is under consideration there, let us not expect any backward step from the faculty of Harvard College. The teachers of the public schools of the future are not going to be content with the baccalaureate degree. The teacher of the future we expect will hold the degree of M. A. or Ph. D. The proposed change at Harvard is but slightly changing the relative place of the bachelor's degree. The aim is to make it cease to mark the goal of attainment.

No university has the least idea of diminishing in any degree teachers' opportunities for culture. There is to be established at Harvard a course of four years to be devoted to learning how to teach the subjects of the secondary schools. Specialization is not an obstacle to good teaching, nor is it inconsistent with highest culture. In the West, specialists are at work in the schools, all of them men of culture. All the schools are asking for specialists. In the West they are asking for specialists in geography, which is so infinitely interesting, when taught as a natural history subject.

The wide-spread discussion of a modest proposition made by the faculty of Harvard College makes it unquestionably sure that there is a great and awakening interest in the country in the subject of education. The question of a shorter course should come into the grammar schools, where most of all it needs to come. The faculty of Harvard College believe that they are promoting the interests of the country by making as good a statement as they can for reducing the time spent in mere preparation for the work of life. President Eliot's earnest hope is, that the public discussion of the matter in all its bearing will be continued.

Mr. Tetlow asked concerning the course for secondary teachers, whether, since the majority of teachers are women, there would be provided a similar course at the Harvard Annex. President Eliot replied that he presumed the faculty of the Harvard Annex would provide a parallel course in this subject as in all others, and that he knew that the movement at Harvard was to be followed by the establishment of a similar course at Wellesley College.

President Eliot referred to Johns Hopkins University, where the degree of B. A. has long been given at the end of three years and has excited no adverse criticism. Being a small institution, it has been able to consult the best interests of each individual. The needs of each student have been carefully considered, and the length of course prescribed that seemed fitting to each. The degree has been given sometimes in more, sometimes in less than three years. The position of the bachelor's degree at Johns Hopkins is simply lower than at other universities. The briefer under-graduate course there has in effect made the fourth year of the culture course the first year of the professional course.

Mr. Parmenter said he wished to bring up a question which seemed to him in line with the present discussion. He wished the students applying for admission at Harvard might have a better chance to show what they could do. He had given an examination to his students, having them mark how much they had done in the time allowed by Harvard, and then had given them twenty minutes more. He found that nearly all had failed in the time allowed, and that nearly all passed by having the extra twenty minutes. Mr. Collar said though he did not think the subject at all in line with the previous discussion, he wished, since it had come up, to give his testimony on the geometry papers. They were admirable in themselves, but he would beg for a little more time. It has been his custom to make a point of either Greek or Latin for a period of months, at one time having the class read all Latin, at another all Greek. His Latin class had read more than usual in Cicero, and had been reading only Latin for four months when he gave them one of the Harvard admission examinations which he considered an unusually excellent paper. The class were all good scholars, but in the time allowed, not a boy finished. If they could do no better under favorable conditions in their own school room, it was, Mr. Collar considered, an atrocious wrong so to limit them when under the strain of the admission examinations.

The half hour left for special topics at the beginning of the Saturday morning session was filled with discussion of a motion made by Professor Safford of Williams College, to the effect that a committee of principals of secondary schools be appointed to consider the whole subject of preparatory mathematics for college. The standard of mathematics is being raised in the colleges, and professors therefore wish students to receive better preparation in the subject. Much trouble would be saved if the matter could be discussed and the amount which can legitimately be required of the secondary schools be decided upon. All the previous discussion of the meeting seemed to Professor Safford to bear on this point. The amount of time spent on preparatory mathematics should be better defined from the position of the secondary teacher. The subject will probably be discussed from the position of the colleges in the meeting of colleges and preparatory schools in the fall. Four points were suggested for consideration in the matter. 1. The order in which algebra and geometry should be studied. 2. Better methods in teaching geometry. 3. Arithmetic as a requirement for admission to college. 4. Uniformity of requirements in the colleges. At present the amount of mathematics required varies greatly in the colleges.

During the five minutes recess we heard discussion on the subject which was surely worthy to have come before the meeting. The opinion expressed was that in mathematics there has been an advance in details, but not the needed change in the system. It is a wrong that pupils should begin neither algebra nor geometry before they are fourteen. Arithmetic often is not understood until the light of a little algebra has been brought to bear upon it. Many students to whom arithmetic was always a profound mystery find geometry the easiest thing they ever studied. Much of the time spent upon arithmetic might be better employed upon algebra, geometry, or languages.

Mr. Billings opened his paper by saying that at the time of President Eliot's address at Worcester, he had considered the statements made in it so incorrect as to be their own best refutation. But as he had since heard a member of the association say that he considered the grammar schools had been fairly hit, and since an incorrect impression seemed to be going over the country with regard to the Massachusetts grammar schools, he had consented to take up the cudgels in their behalf. He hoped to point out the fallacies in President Eliot's remarks and to sift out the good for the future benefit of the schools.

It had been generally supposed that it was a Cambridge grammar school in which President Eliot had pursued his investigations, and there were many reasons for regarding this supposition as correct. Therefore the speaker thought it allowable to take a Cambridge grammar school as his text in disproving the statements made at Worcester. He quoted at length President Eliot's opening remarks, and found in them the confirmation of his belief that President Eliot "lacks every qualification for a critic of the grammar schools."

He then proceeded to arraign some of the statements made at Worcester. His refutation seemed mainly to consist in flat denial. To disprove the affirmation that no one can find out what is done in a Massachusetts grammar school, he quoted the requirements as stated in the report of the schools of Cambridge. Hence it seems that one can find out what is done in a Massachusetts grammar school, because it is all in the superintendent's report.

Mr. Billings agreed with the address at Worcester in one point, namely that at present there are not hours enough a day given to school work. Vacations are too long, and there are too many holidays. Yet even with more time there is not room in the schools for more subjects. Sewing, cooking, and the use of tools are no doubt useful accomplishments and ones which the children should learn at some stage of their career, but the schools are not able to give this instruction. Every well-organized school has work enough already.

President Eliot had affirmed that the entire amount of reading in the grammar school course could be read aloud in forty-six hours. Mr. Billings called attention to the three-fold aim of the teaching in reading in the schools, showing that the mere reading aloud of the pages indicated is but a small part of the work required of the schools. First, the children have to learn how to read, second to be taught to like good books, third to commit passages to memory. A high school graduate took fifteen hours to work out all the problems in arithmetic that are done in the first two years of the grammar school course. That made no allowance for the time spent in learning how to do any of it, or in considering under what particular rule any problem came. Neither did it allow for the unavoidable distractions.

At the close of Mr. Billing's paper, Mr. Goodwin, of the Newton high school, gave as his opinion that the address at Worcester could be made of great value if taken in the right spirit, and the facts duly considered. The age at entering the Newton high school is something over fifteen years. This age is too great. At this point, language study and science have not been touched; there has been little training of the powers of observation, and no work in French or German, Latin or Greek. This condition of things is all wrong. The grammar schools do not do as much solid work as they ought. Very little studying is done outside school. There is no reason why pupils should not take work home to do. The curriculum rather than the teachers is at fault. 1400 hours are given to the study of arithmetic before entering the high school. Three quarters of the work which is prescribed for the ninth grade of the grammar school in arithmetic could be left to the high school. 600 hours are given to geography; that could be reduced by one half, and then, by requiring more study, the age of high school entrance could be reduced by one year.

Superintendent Cogswell occupied nearly half an hour reading examination questions from the report of the Cambridge grammar schools, which he thought would show better than any argument what is done in those schools.

Mr. Goodrich of Salem spoke very pertinently as to what was the question at issue. Let us drop the Cambridge grammar schools, he said, and consider the matter in its general bearing. Preparatory teachers are so used to the strictures of college professors upon their work that they are perhaps hardened to them. Nevertheless it behooves them to consider in the present case whether there is a remedy for the evil pointed out; whether there is any point in the work below the high school where time can be saved with justice to the pupil. Students do not enter the high school in a mental condition to do the work which they ought to do. They do not take hold as if they were used to study. Mr. Goodrich hoped to find out from the discussion whether he is justified in thinking pupils ought to enter the high school with a better mental training.

Mr. Prince agreed with the address at Worcester, that no one can find out what is done in a Massachusetts grammar school. He believes that examinations, recitations, requirements, do not, should not, embody the work of a school. This whole discussion seemed to him to bring teachers face to face with the question, What are the schools for ? In Germany the schools corresponding with our grammar schools use the briefest of texts. The work of the school is not to be estimated by the number of pages studied. This speaker advocated the abolishment of the whole system of examinations and per cent marks. No such system exists in Germany. The preparatory schools of the German gymnasia are not like the people's schools, — our grammar schools. The former train for the university exclusively. It was asked at this point what incentive was used in place of "marks." Mr. Prince replied, the teacher. The teacher is the central figure, the all important factor.

In the talk which followed it was urged by several speakers that to train pupils for the high schools is but a small part of the duty of the grammar school teachers. Their work is to make the most of the children under their charge, only a small proportion of whom are aiming at higher education. It seemed also the thought of many that there is not enough digging, not enough hard study on the part of the children. One of the main difficulties to be met in the grammar school, the high school, and under-graduate course at college, is the two-fold line of work that has to be carried out, to meet the wants of those students who are going on to higher study, and of those who are not. It would simplify matters greatly if there could be two systems of schools to provide for those two ends.

At this point some one called for President Eliot. He responded, saying that the only part of Mr. Billing's paper to which he cared to reply was that with regard to the "carelessness of statement" in his address at Worcester. He wished to say that the conclusion so generally accepted that it was a Cambridge school of which he had spoken was founded on no information received from him. He had based his estimates of the amount of work done in the school to which he had referred on returns secured in writing from the teachers in every room. The teachers had no motive to falsify these reports, surely not to make them show less than the actual work done. There might have been slight inaccuracy in his calculations, but the limit of error is very narrow. However, the main point does not lie there. To cover a large amount of ground is not the object of education. The object of education is the getting of power. There is no difference in this respect anywhere in the course. The admission examinations at Harvard are not to find out how much a boy knows but to guage his power.

The purpose of the address at Worcester was not to prove a case against any particular school or schools, but to awaken public sentiment to the fact that a system of education is all wrong which forces a young man to spend one third of his life preparing for the rest of it. The only power in the country which has the future of the schools in its control is the educated public sentiment.

As to the question of reading in the grammar schools, it would be of advantage to the whole public school system if every Reader could be abolished from the schools. The Readers are not literature. Their contents are trash; not fit material to put before the childish mind. In a Reader intended for children of eight or nine, not a hero or heroine of the human race was mentioned. The heroes and heroines were all animals. The object of teaching is to convey to young people the ideals of the human race just as soon as it can be done. This end is not served by the reading of stories of dogs and cats. Of the real literature that is now published for the use of schools, much more is used in the west than in New England.

The elective system has got to go down into the grammar schools. It has already penetrated into the high schools, and deeper in the West than in the East. What are the purposes of the schools of a democratic society? To give the child of a poor man an equal chance with the child of the rich man for the highest education he is fitted to receive. The present grammar school does not answer that purpose. The age to begin the study of languages is eight, nine or ten. Children abroad begin at that age. The grammar school positively forbids a child to begin language study at the right age. So far it is an obstruction; and so in the sciences. The rich man puts his child into a private school, where the child's individuality can be consulted, where are all the contrivances for education. Here is the point where the grammar schools fail. The selection of what subjects should be taught to each child should be lodged with the grammar school master. All the appliances for teaching should be at the command of the grammar school, as fully as is the case with private schools.

Uniformity has been the greatest educational evil throughout the country, — the averaging of the mass, the tendency to make all we do mechanical. It existed in the colleges twenty-five years ago. The greatest advance in education is the principle of election, selection, individualization. It should penetrate into the grammar school.

Mr. Kneeland was the last speaker at the session, saying in brief that the demand of to-day requires teachers to have far more to do with individual pupils then they had fifty years ago. Teachers have too many children under their charge. They are willing to do the work. Only give them a smaller number of pupils.

The meeting then adjourned. Following is the list of officers for the coming year: —

S. Thurber, President,
Wm. F. Bradbury, Recording Secretary,
Rest F. Curtis, Corresponding Secretary,

Executive Committee: — S. Thurber, A. L. Goodrich,
Wm. F. Bradbury, J. N. Ham,
Rest F. Curtis, E. J. Goodwin,
J. B. Sewall.

COMMUNICATION.

PEDAGOGY.

To the Editor of THE ACADEMY: —

I am told that there is no such thing as a Science of Pedagogy. As a rule teachers, good and poor, in school and in college, unite in a shake of the head and a remark to the effect that a teacher like a poet is born and not made. President Dwight of Yale applauds the statement of President Eliot of Harvard, that higher institutions of learning have good reason for not trying to teach the philosophy of education. I am told that the history of education is uninteresting and am therefore expected to believe that the search for fundamental principles will be fruitless.

Let us look at the educational field for an instant. In the primary school we find that the word and sentence method of teaching reading has almost universally superseded the old-fashioned a-b-c method. I am forced to believe, however, that the change which has taken place in this direction has been rather the result of experiment than of the recognition or discovery of a general principle of mental development. In the secondary schools we find some good teachers and many poor ones. Among the good ones — good so far as apparent results and public opinion are concerned — we sometimes find diametrically opposite methods of instruction. Some teachers boldly express their theories as to new methods and a very few consistently and persistently put their theories into practice in the class room; but if a man is found who ventures to teach Latin or geometry, for instance, in any but the conventional way he is at once opposed by many who ask, not whether he is acting in accordance with the laws of common sense, but some such irrelevant question as, can his method be made a success by poor teachers? In the college as in the school we find some men laboring hard to improve their methods and others resting complacently on their oars. But here as elsewhere the live teacher strives to formulate a method of his own rather than to understand the philosophy of his work.

There appear to me to be two roads to better teaching: One, and the one almost universally followed, leads each teacher to strive to do better work without regard to the work of others, except so far as may be made necessary by the authority of his employers; such authority is greater in primary schools than elsewhere, hence remarkable improvement has been made during the last fifteen years in teaching young children to read English, while no noticeable improvement has been made in the same time by college instructors in modern languages. This road leads to experiment, comparison, and coöperation wherever there is able supervision or a strong public sentiment, but in colleges and in most secondary schools it leads to a jumble of nearly as many methods of teaching — good and bad — as there are instructors. That such effort though purely experimental and semi-scientific nevertheless results in some progress is shown by a slight approximation among the best teachers to a unanimity of belief as to the best methods of teaching some subjects. The educational optimist points with pride to the abolition of the a–b–c method of teaching reading; to improved methods of teaching the use of the English language both in school and in college, and to the growing tendency to let school children enjoy some of the literary treasures which the power to read unlocks for them; but when it comes to mathematics he has to wear his optimistic coat inside out except on special occasions. I have a friend who has spent years in trying by the aid of elaborate drawings "to square the circle," whereas a few hours of study of the science of geometry would have shown him the uselessness of such an attempt. Most of us can point to would-be inventors who have spent their lives in poverty because of their continued attempts to accomplish the impossible through an ignorance of the fundamental laws of mechanics. It appears to me that the road just described is in danger of leading many teachers to similar useless efforts.

The other road to better teaching is so seldom traveled that the few who follow it find little sympathy or support. This road leads a man to the same sort of work as was done by Newton in discovering the cause of the fall of the apple, by Galileo in his observations of the swinging lamp at Pisa, and by Franklin in flying his kite during a thunder storm. Each of these men by the use of his reasoning powers in connection with the simplest occurrences was able to deduce laws which were applicable to events far beyond the region of his own experience. Will work of this kind when applied to the observation of mental growth result in the discovery of fundamental laws? I believe it will. I believe too that fundamental laws of mental growth are close at hand, that they can be deduced from observations of simple events, and moreover that they have already been discovered again and again and would now be of universal application but for that perversity of mankind which expects that a man will cease to be a rational being the instant he becomes a teacher. Were a farmer to adopt in teaching his boy to drive a horse the irrational method of the school teacher, his course of instruction would be somewhat as follows: —

Definition: A horse is a hoofed quadruped of the genus equus, having one toe on each foot, etc., etc. (To be learned by heart.) Enumeration of the forty-five parts of a horse as given in the dictionary — eyes, poll, etc. (To be learned by heart.) Definition of a wagon, and of a harness, with the names of the different parts of each. (To be learned by heart.) Questions on the above. A separation of the science of driving into twelve or more cases with a rule and questions for each case. Practice on a wooden horse. Review followed by punishment for failures to recite the definitions or to answer the questions.

The method just described is the one adopted by almost every text-book writer and is therefore more or less slavishly followed in almost every school-room. In formulating the above I took for my model the method of teaching interest adopted by one of our most popular text-books on arithmetic. In this book we are given first the definitions of principal, amount, and rate; we are then told that the principal is the base of percentage and that the interest is a percentage on the base. We are next introduced to nine different cases of interest with a rule and one or more formulas for each case.

What is there to interest, may I ask, but an application of the principles involved in the following problem?

If I pay $6 for the use of a horse for one week, what must I pay for the use of a horse for two weeks? What for the use of seven horses for eight weeks?

The dictates of common sense, the experience of all persons who have been obliged to teach unprofessionally — as illustrated in the treatment of apprentices in all kinds of business — and the unanimous opinion of educational writers whose names have become classic, all point to the method just described as radically wrong.

I can perhaps best indicate those fundamental principles of mental growth on which I think every method of instruction should be based by a few quotations from well known writers.

From *Herbert Spencer:* —

> Nearly every subject dealt with is arranged in abnormal order; definitions, and rules, and principles, being put first, instead of being disclosed, as they are in the order of nature, through the study of cases, and then, pervading the whole, is the vicious system of rote learning—a system of sacrificing the spirit to the letter.
>
> To give the net product of inquiry, without the inquiry that leads to it, is found to be both enervating and inefficient. General truth to be of due and permanent use, must be earned. "Easy come easy go," is a saying as applicable to knowledge as to wealth. While rules, lying isolated in the mind—not joined to its other contents as outgrowth from them—are continually forgotten, the principles which those rules express, piecemeal, become, when once reached by the understanding, enduring possessions. While the rule-taught youth is at sea when beyond his rules, the youth instructed in principles solves a new case as readily as an old one.

From *Joseph Payne:* —

> The principle I am contending for—that the child is capable of teaching himself without explanations—is indeed very generally acknowledged in word by teachers who also very generally repudiate it in fact.
>
> I do not at all admire explanatory discourses; young people give little attention to them, and never retain them. Things! things! I can never

enough repeat it, that we make words of too much consequence. With our prating modes of education, we make nothing but praters.

The teacher has recognized his true function as simply a director of the mental machinery which is, in fact, to do all the work itself; for it is not he, but his pupils, that have to learn, and to learn by the exercise of their own minds.

That by teaching himself—relying on his own powers—in a special case, he was acquiring the power of teaching himself generally, and was therefore on the way to gain the habit of independent mental self-direction—the real goal of all the teacher's efforts.

It is obvious that no method of teaching which consists in bringing a bit of this thing (or author), a bit of that thing (or author), transiently before the pupil's mind, creating ideas, like dissolving views, each of which in turn displaces its predecessor, which makes acquisitions only to abandon them before they are "incorporated with the organic life of the mind," can possibly be a good method.

The earliest *instruction* of children ought to be a *continuation* of the natural process by which they have learned what they already know.

Personal experience is the condition of development, whether of the body, mind, or moral sense. * * * * * *

Education can only be gained by *doing a little well.* * * * * * *

He [the teacher] has very imperfectly accomplished the end of his being if he dismisses his pupils as merely mechanical artisans knowing the *how*, but ignorant of the *why*; experts in processes, but uninformed in principles; instructed, but not truly educated. It is the possession of principles which gives mental life, courage which is not daunted where routine fails, the power which not only firmly directs the established machinery, but corrects its apparent eccentricities, can repair it when it is deranged, and adjust its forces to new emergencies. Take the case of a routine pupil to whom you propose an arithmetical problem. His first inquiry is, not what are the conditions of the question, and the principles involved in its solution, but what rule he is to work it by. This is the question of a slave, who can do nothing without orders from his master. Well, you give him the rule.

The rule is, in fact, a *résumé* of principles which some scientific man has deduced from concrete facts, and which represents and embodies the net result of various processes of his mind upon them. But what is it to our routine pupil? To him it is merely an order given by a slave driver.

From *John Locke:*—

The business of education, as I have already observed, is not, as I think, to make them perfect in any one of the sciences, but so to open and dispose their minds as best to make them capable of any when they shall apply themselves to it.

He that begins with the calf may carry the ox; but he that will at first go to take up an ox, may so disable himself as not to be able to lift up a calf after that.

The surest way for a learner in this as in all other cases, is not to advance by jumps and large strides: let that which he sets himself to learn next be indeed the next, *i. e.*, as nearly conjoined with what he knows already as is possible; let it be distinct, but not remote from it; let it be new, and what he did not know before, that the understanding may advance; but let it be as little at once as it may be, that its advance may be clear and sure. All the ground that it gets this way it will hold. This distinct, gradual growth in knowledge is firm and sure; it carries its own light with it in every step of its progression in an easy and orderly train, than which there is nothing of more use to the understanding. And though this perhaps may seem a very slow and lingering way to knowledge, yet I dare confidently affirm, that whoever will try in himself, or any one he will teach, shall find the advances greater in this method than they would in the same space of time have been in any other he could have taken.

I therefore take the liberty to repeat here again what I have said elsewhere, that in learning anything, as little should be proposed to the mind at once as is possible; and that being understood and fully mastered, to proceed to the next adjoining part yet unknown, to some simple, unperplexed proposition belonging to the matter in hand, and tending to the clearing of what is principally designed.

From *J. S. Mill:* —

If the grounds of an opinion are not conclusive to the person's own reason, his reason cannot be strengthened, but is likely to be weakened by his adopting it.

From *J. J. Rousseau:* —

Our pedantic mania for instructing constantly leads us to teach children what they can learn far better for themselves, and to lose sight of what we alone can teach them.

Let him know a thing because he has found it out for himself, and not because you have told him of it. Let him not learn science, but discover it for himself. If once you substitute authority for reason, he will not reason any more; he will only be the sport of other people's opinions.

When I see a man carried away by his love for knowledge, hastening from one alluring science to another, without knowing where to stop, I think I see a child gathering shells upon the seashore. At first he loads himself with them; then, tempted by others, he throws these away, and gathers more. At last, weighted by so many, and no longer knowing which to choose, he ends by throwing all away, and returning empty-handed.

The thing is, not to teach him knowledge, but to give a love for it, and a good method of acquiring it when this love has grown stronger. Certainly this is a fundamental principle in all good education.

Briefly stated the method suggested by the above quotations consists in inducing the pupil to gain an experience of his own which will enable him to regard every definition as the result of his own personal observation and thought, every rule as a statement of the method by which he has done something, and every new word as only a labor-saving device for the expression of a familiar idea. This result is accomplished by a series of questions so framed as to lead the pupil to draw such conclusions from what he already knows as will constitute new elements of knowledge on which in turn new questions may be based. These questions at the beginning of each subject are made simple so that the mind of the learner may be occupied with principles rather than with their mechanical applications.

In the application of this method the duty of the teacher is merely to provide material for work and to see that it is done; the duty of the pupil is to work and to discover.

The only text-book I ever studied which follows out this method consistently is Warren Colburn's First Lessons in Arithmetic, and to this book I owe a greater debt of gratitude than to all other text-books combined.

I am perfectly well aware that what I have quoted and said is old, that it is well known, and that it is for the most part assented to by teachers; but that it is lived up to, except in part, by any but a very few I am compelled to deny. I know too that these doctrines of Rousseau, Spencer, and others are too simple, are too easily put into practice, and appeal too strongly to the common sense of the average man to be regarded as a satisfactory foundation for a Science of Pedagogy by many of our educational theorists; there are, alas, many writers who appear to delight most in what is most disheartening or most unintelligible to the men and women who earn their bread and butter in the school room.

It appears to me that every course in pedagogy should require the student first of all to convince himself of the truth or falsity of this law of assimilation which I have tried to describe. Such an investigation ought to precede the study of "methods" and "systems" as surely as a knowledge of Newton's laws should precede a study of projectiles, or a knowledge of electricity should precede, for any one but a mere mechanic, the construction of an electrical engine. In a course in pedagogy which I have before me I find that most of the students' time will be devoted to the study of French, Italian, Scandinavian, Russian, British, and American Educational Institutions. This programme causes me to wonder how much progress Newton would have made in his discoveries if, before drawing conclusions, he had thought it necessary to observe the falling of an apple in every country in the world. In another programme I find that "methods" of teaching eight different subjects are to be studied and that the work is to be supplemented by lectures on Psychology. Is not this like trying to build a chimney by beginning at the top? We are expected to begin in the air only to make progress downward with an additional weight to bear at each step.

If every teacher in college as well as in school is required to study the philosophy of his work before he begins and is properly supervised afterwards I have no fear that we shall fail to create a recognized Science of Pedagogy.

I do not believe that because we cannot agree in our ideal of perfect manhood we shall therefore be unable to create a science which will enable us to produce in the average child those elements of perfection about which we do agree. I do not suppose that a dwelling house could be built which any large number of persons would call perfect, but I would not therefore discard science in the construction of dwellings.

X. Y. A.

In that part of our notice of Earle's *English Prose* which appeared in our April number we noted the author's confident opinion that the habit of placing an adverb between the *to* and the verb in the infinitive is a recent innovation in our language. Prossessor Earle expresses surprise that an instance of this interposed adverb appears in certain legal phraseology of the reign of Henry VIII. But in his own book we find the following sentence occurring in a paragraph quoted from Reginald Pecock, who wrote it in the middle of the fifteenth century: — "and therefore thei ordeyned-sen spicis and saucis forto therewith make her mete the more sauori and more plesant." Truly, there is no new guise but it was old.

BOOKS RECEIVED.

English Prose; its elements, history, and usage, by John Earle, M. A., Professor of Anglo-Saxon in the University of Oxford. London: Smith, Elder & Co., 1890.

III.

CHAPTER VIII. discusses Euphony, first as dependent on the choice of words, and then as determined by the structure of sentences.

"There is no greater foe to Euphony than Monotony. Any strained attempt to write in words of one class, sort or size, is sure to beget monotony. An agreeable discourse cannot be written with words all of one or nearly of one length. The ear is offended, though the reader may be reading in silence. A wise admixture of polysyllabic words is necessary in order to produce a pleasing sense of modulation and to ward off a dull and drowsy sameness. There is a fatuity about such efforts, which is the more to be regretted as they have an affinity with that sound natural instinct which draws us towards the native elements of our language. They consort with a vague floating notion that Saxon words are all short, and that short words are all Saxon. He who grudges the polysyllables their due place will never write anything that can be redd aloud or listened to with pleasure; and this void of Euphony will also, as I have said, infest even the silent perusal."

What Professor Earle has to say about Style is especially interesting. "The term cannot be applied in its full significance to anything short of a Paragraph. Style does not, strictly speaking, reside in the words or in the phrases, or even in the sentence, but in that sequence of sentences which constitutes Discourse, and of which the smallest adequate sample is a Paragraph." — "Style is an indefinable thing. We can say how the term rose, and we can say where and under what conditions the thing itself rises, but we cannot formulate a definition for it. It is in like case with Wit or Beauty or Character, all of which are well known and easily recognized, but cannot be defined." — "The young writer should attend to his diction very carefully, but leave his Style to take care of itself." — "Style, to be anything, must be the product of a natural growth and development, and this development is one that takes place by the habit of giving thought its best and most natural expression *pari passu* with the development of the mind."

The lesson to be drawn by the teacher from Professor Earle's discussion of style may be summed up briefly as follows: — As regards the teaching of composition, let all consideration of style alone, and bend your energies to the criticism and improvement of diction. Do not propose to a young learner a special style as a model. We believe that this is sometimes done in our schools; but the practice cannot be other than pernicious. In writing his composition the learner has no more business to imitate a style than to copy his matter. No one can write anything without writing it in a manner in some way peculiar to himself, and this manner of his is his style. With regard to what we designate as a person's *manners*, for the formation of which so much can be done in youth, the function of the dancing-master, the teacher of deportment, is simply to look out for the elements, the details, the items, or what may be called the *diction* of manners, while the person must be left under the influence of his entire environment, to grow up into his own *style*. So the young writer should submit his writing to wholesome pruning, that he may be led to give conscious thought to his diction; but his style, the ultimate form which his writing tends to assume, should be left to itself. The teacher of several pupils of marked ability soon comes to note with interest the differences in their styles. These differences are as personal to the pupils as their voices, their statures, their complexions. For the teacher to look upon the pupils' styles as he would look upon their clothes, which may be put aside, brushed up, exchanged for better, is to take a most ignorant view of human nature.

"Nothing is more difficult to define than the degree in which consciousness should enter into the exercise of language and of the literary art; — but we give our voice deliberately in preference for a low degree of literary consciousness at the moment and in the act of composition. It is by minimizing consciousness that a whole Style is produced, free from caprice and mannerism and zig-zag."

The next three chapters of his book, including some 150 pages, Professor Earle devotes to the history of English Prose. Whoever has given interested attention to the differences of our speech in the various stages of its growth will find these chapters full of stimulus to thought if not altogether satisfying as a scientific exposition. The subject has never adequately engaged the zeal of patient investigators. The ways in which explorations in our earlier diction and style should be conducted are not yet agreed upon among scholars.

One naturally recurs to the collections of Maetzner, Koch, and Fiedler in their respective historical grammars, to Einenkel's "Streifzüge durch die mittelenglische Syntax," and to the two books of Kington Oliphant, "Old and Middle English" and "The New English." But such works are far from satisfying the reasonable desire of students for a history of English prose. How such a history should be conceived is still a question. Histories of vocabulary and of forms we have in abundance, and histories of constructions are not wanting; but just as these histories relate to *grammar*, so we now need a history relating to *rhetoric*, that is, a history of phraseology, of style. Rhetoric has not yet sufficiently put itself into connection with our earlier speech. Its rules are therefore getting isolated from its matter and acquiring an aspect of artificiality. Modern speech refuses to brook their restraint. Rhetoric has no right to exist except as a mirror of usage. Its prohibitions and requirements must rest on a historical foundation, or they lose the respect of students who investigate for themselves and try, independently of rules, to establish their speech on what they find to be the actual usage of writers. A writer is a good writer who speaks the speech of his contemporaries so strongly and unaffectedly as to win their ear and find lodgment for his thought in their minds. A writer is not a good writer for following punctually the rules of the rhetoric, but a rhetoric is a good rhetoric because it detects the sources of the goodness of the good writer and presents them intelligibly in scientific form.

But to return to Professor Earle, we note, as the conspicuous feature of his chapters, that he finds in the history of English Prose three distinct "culminations": at three epochs the "language culminated into a standard, — a standard which has retained its literary value for generations and for centuries."

The first of these culminations he places in the Tenth Century. To make good this claim in behalf of tenth-century prose, he quotes from the extant land-charters and from the Bible translations of that period, but not from Aelfric.

The second great culmination Professor Earle finds in the Fifteenth Century, "a great era of prose." "Vast quantities of verse were indeed produced in this century, but nobody reads it; it is but prose in disguise. On the other hand the Prose is mature and excellent, and the faculty of prose-writing is widely diffused. The Paston Letters alone, if nothing else had been preserved from this century, would be enough to satisfy us of this." "But what more especially marks this age in our history is the transfer of entertaining literature from Poetry to Prose." "The Fifteenth Century made English Prose to be what it substantially is at the present day. This second culmination has a character very different from that of the first culmination in the tenth century. The product of the first culmination was essentially a diction of the upper and privileged class, but this second culmination on the contrary produced a diction which was the voice of the body of the nation."

Our readers will remember the fifteenth century as an age of foreign and domestic wars, — the century of Agincourt, of Jack Cade, of the wars of the Roses. It was the century that intervened between Wycliff and Tyndale, — the century of Fortescue, Malory, Caxton. To conceive of this century as a period of any kind of literary "culmination" is not, at first thought, so easy. But Professor Earle considers that the writers of the Tudor century found a prose ready formed for their use, and that therefore this prose came into being in the less brilliant period of struggle and strife which went before.

More easily intelligible is Professor Earle's Third Culmination in the Eighteenth Century. The great representative writer of prose in this period he naturally finds to be Samuel Johnson. Chalmers and Macaulay in the nineteenth century are the "exponents and legitimate successors of Johnson; Chalmers of his long-robed sentences as seen in the *Rambler*, Macaulay of his more artistic groups of shorter sentences, as seen in the *Lives of the English Poets*."

Throughout this part of Professor Earle's book are scattered suggestions of great value to students and teachers of English. We cordially agree with his recommendation of Macaulay's writings as an object of study. From the simple fact that Macaulay's style is wonderfully interesting some recent critics seem to infer that it must be full of hidden pitfalls for the unwary. He holds the reader's attention; therefore it must be that he practises some sort of jugglery, since most writers suffer the reader's attention to flag. With this host of criticism the teacher of youth has nothing to do. Any writer who in historical narration or in literary exposition holds the attention of his reader, and who writes from fullness of knowledge, has the elements of stylistic greatness. Macaulay is no more to be *imitated* than any other writer; but as a writer suitable to be studied and enjoyed, and always to be recommended to young readers, he stands among the very first.

Professor Earle seems to hold in no high esteem the conventional pedagogic exercise of essay-writing. He quotes with approval Mr. John Morley's well-known opinions on this subject as expressed in his lecture "On the study of literature,"—a chapter of doctrine which all teachers of English should read without delay. The exercise which Professor Earle does recommend to the young student is of course much reading of the best authors. One will never acquire a literary style of his own, or literary freedom of any kind, without familiarity with existing literature. It is of small use perpetually to trim and correct the exercises of pupils who never read or who read only current miscellaneous trash. The minds of such youth never catch the beginnings and rudiments of a literary sense; they remain ever untouched by a literary stimulus; their literary breeding remains low, and their expression is always commonplace like their ideas. As a preliminary to writing there must be infinite reading; and this reading must be interested reading, not reading handicapped with notes and erudition and ceaseless pedagogic nagging.

To name the writers whom Professor Earle commends especially to the attention of the students of prose, "unapproachably and incomparably the best" is Samuel Johnson. Next in value he seems to place Macaulay and Ruskin. "Let him read Chaucer and Spenser and Shakespeare; Hooker, Clarendon, Milton, Jeremy Taylor, Defoe, Bunyan, Addison."

We have given to Professor Earle's book on English Prose this long notice, not because the book is in any sense epoch-making in the subject which it treats, but because it abounds in suggestions which we consider especially wholesome for this English-studying and English-teaching generation. In a notable manner the book avoids the dogmatic harshness which we are wont to look for in books devoted to the criticism of diction and style. The latest writers on rhetoric use the crushing manner in setting forth the enormity of violations of their rules. But Professor Earle is always full of sweetness and light. He does not give us in his book a scientific treatise; but then he makes no pretensions. He has not ordered his exposition within the severe lines that the German school would prescribe for such a work; but he has written in English, always with clearness, and from a breadth and a depth of knowledge sufficient to qualify him as a teacher of the great public that he contemplates as his readers.

evidence on the difference of development in the sexes at different ages. As soon as one seriously looks at the question and gets into relation with the collected facts, one sees that the sex question cannot be settled *ex-cathedra* or in a moment. The unscientific attitude of mind towards it is the readiness to settle it off-hand, from one's own private conviction. The scientific attitude of mind is the disposition to rummage all possible sources of knowledge, all records, all books, all society reports in all languages; and to leave strictly unregarded all views and opinions, no matter how great and dignified the authorities who propounded these views and opinions. The lazy, indolent attitude is the complacent willingness to do nothing, to say nothing, to let things drift along.

The sex question is here cited simply as an instance of a current issue, and simply to show the difference between a scientific discussion and a non-scientific one. Special questions are constantly arising in every teacher's experience. Courses of study have to be made or altered; hygienic conditions have to be revised; methods lose their potency and need steeping in new thought; this or that pupil becomes a study, can you interpret this or that indication, can you advise parents wisely as to health, do you know the signs of the critical points in a child's growth, or do you keep everything going always in the same fashion for all; listlessness has to be accounted for with all the discretion known to the wisest medical practice; waywardness appears here and there disturbing the routine, perhaps having far-reaching roots in mental or physical sources, to know which makes all the difference between the martinet severity of the pedant and the appropriate treatment that, with his trained mind, and eye, and ear, would be applied by the large-minded alienist.

These are a few of the instances in which the *special student* in pedagogy is sure to crave enlightenment. This enlightenment is simply another word for *scientific results*, obtained by those who have already worked in the field, and who have had, in a pedagogical society, a focus to which to bring, for comparison and for summarizing, their observations. In such a society such observations can be preserved. The members of such a society, whose special training qualifies them for the work, will have digested the crude masses of such observations, and will have reduced them to serviceable form, always, of course, tentatively and never dogmatically, for in pedagogy, as in medicine, discoveries now and then make it necessary to revise certain areas of conclusions. The special student in pedagogy will then be able to go fruitfully to work, and his task will be, not to elaborate views, but to compare and sift and apply evidence; and his work will become a contribution to the existing fund, instead of remaining an isolated study, unknown and inaccessible to his contemporaries and his successors.

As there is an art of practising medicine confessedly based on medical science; as there is a science of æsthetics holding a nomothetic relation to all the fine arts; as there is a science of phonetics, whether the speaking man knows anything about it or not; as there is a science of economics, and people may yet trade successfully without surmising its existence; so there is a possible science of pedagogy, holding most intimate and important relations to the art of teaching. Here also *naif* practitioners who have succeeded in their work without conscious dependence upon principles may naively express their disbelief in the existence of such principles. Such expression may be interesting, but it is not important. Pedagogic science is an old conception among German thinkers, where it has grown already to fair proportions. But all fruitful work hitherto done in this science has been in the laying of foundations. Such a science is not thrown off full grown by a philosopher, as the result of a season of meditation with eyes and ears closed to the world of facts. First must come infinite observing and recording. No man is so gifted that he can pronounce in advance what the conclusions will be. This science is not occult or medieval: it is modern, and it demands *facts*.

MINERVA AND CUPID.

II.

Comte Léon Tolstoï.—*La Liberté dans l'Ecole.* Première traduction Française. Paris: 1888.—*L'Ecole de Yasnaïa Poliana.* Première traduction Française. Paris: 1888.—*Le Progres et l'Instruction Publique en Russie.* Première traduction Française. Paris: 1890.

When a man, in part answer to the question that he has himself proposed, "What is to be done?" says,* "I must neither lie to others nor to myself. I must not fear the truth, whithersoever it may lead me," it is quite likely that his ideas may depart somewhat from strict, conservative orthodoxy. When the remark, though made later in life, is recognized to be only the echo of the ruling idea of all the previous life, when the speaker is of the noble class by birth, yet by life a man of the people, whose zeal is centered in the establishment of the arts of peace, though — and perhaps because — he has been trained in the arts of war, whose general fame is that of a seer, with vision reckoned by some to be false and by some to be true, when this rough-bearded man essays the art of school-master, his statement of his scheme and the story of its practice is likely to be at least interesting reading. These books are not yet in English, the book-seller told me. That was the reason, though he kindly offered to get them for me in the Russian, that we compromised on the French translation.

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*On the Significance of Science and Art. vij.

Léon Nikolaïevitch, Count Tolstoï, was thirty-four years old when, in 1862, he published the first of these essays; in 1885, as the last essay shows, he had not materially changed his more youthful views. For the watchword of his theory he in a measure echoes Rousseau, whose *Emile* appeared just a century before. His impulse seems to be that which stirred Rousseau when he wrote in his preface, "I shall speak but little of the importance of a good education; I shall not stop to prove that the system that is in use is bad; a thousand others have done that before me. * * * I will only remark that from time immemorial there has been the cry against the established custom, without anyone's bethinking himself to propose a better. The literature and knowledge of our age tend much more to destroy than to build. * * * In spite of all the writings that have, they say, but the one end, the public good, the chief good is still forgotten, the art of making men." (So far as Count Tolstoï is concerned, Americans can read these sentiments with complacency; for he has said of the school system of the United States that it has attained results relatively magnificent, and that nowhere else has popular education developed so quickly or spread so wide.) Emile was to be free to respond to Nature. Tolstoï's watchword too is "freedom." Neither of these men is content to be simply an iconoclast. Each claims the buoyancy that comes from the denial of a falsehood and the strength that comes from the affirmation of a truth. Whether Tolstoï has built better than his antetype, coming time must tell. Indeed, so minute are some of the correspondences that it is not so easily answered whether in the process of metempsychosis the nervous, subjective Frenchman is not today paralleling in a wiser and happier atmosphere his intellectual life of a century ago.

Count Tolstoï's aim is to train his pupil so that he may be able to get his own living and do his duty in that state of life to which he seems to be called. Thus the little moujik is trained to be a man of his own people; there is no attempt to develop him out of his class. Thus he prefers to risk now and then smothering a genius rather than to turn out an army of mannikin ladies and gentlemen for whom his world has no use. Perhaps, too, he does not think with Doctor Johnson* that "the true genius is a mind of large general powers, accidentally determined to some particular direction;" but rather that "a great artist is always a great man, and if he finds the outlet for his talent closed on one side, he forces his way through on the other," as a German writer of today puts it.† But who shall control the education of the children? It is surely pardonable if the parents wish to do it; the church, from its very nature rationally claims the right; the government is reasonable when, for its own preservation, it compels attendance at military schools and establishes schools of law, and the like; but the so-called educated class of the community has no right to try to make over the ignorant into something like its own members — there are many reasons why they have not. Then what is the true pedagogue; that is, the leader of the child to the teachers of truth? First, last, and only, the child's unrestrained and unmutilated childishness, the boy's youthfulness, the man's manhood, working through curiosity and interest to enthusiasm. But there are so many forms of education, of culture, that, when they are presented to the pupil, may not awaken his curiosity or his interest or his enthusiasm! Then he does not need them, at least not just then, — or else the subjects are not well presented. Count Tolstoï "cannot recognize, as some teachers do, the sacrament of culture, exercising over the pupils an unseen action apart from the subject matter of the lessons."‡ Will this theory of student freedom work successfully? If it is the true theory it should be the ground-work of rational practice. Count Tolstoï has tried it; and *L'Ecole de Yasnaïa Poliana* is an account of his failures and successes. Who then should be responsible for the instruction of the people, or who should be at the back of any national system of education? The People: the whole People. The People is greedy to learn—this is evidenced by the ostrich-like, earnest avidity with which, in the past, it has swallowed anything which might be offered to it as learning—and the People has the sense to know just what it wants to learn. In any such system, what will be the unit, the individual school? There will be no typical school. Each will be adapted to its constituency; some will have high salaried professors, in some villages the schoolmaster will "board around"; some schools will be open all the year, others only during the winter or in the evening; the curriculum of some will be more varied than that of others, but each school will attempt to be a place to which even the youngest pupil goes up led by love, as does the student at the great schools of science and art, because he finds that the teacher will impart something that the pupil longs for, and which the teacher witnesses is good because he practises it as well as preaches. Thus the system may combine in as great a degree as possible the freedom of the pupil and of the parents. These will evidently resemble much more the old-time, country-district schools of the United States—which schools, the pessimistic croakers may add, furnished the nation with its great men—then they will be like the exquisitely graded and elaborately equipped institutions that are our own models today.

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* Life of Cowley.

† August Weismann, *On Heredity*.

‡"*Question.* What meanest thou by this word *Sacrament?*
Answer. I mean an outward and visible sign of an inward and spiritual grace given unto us;" * * * —*A Catechism.*

After reading such books as these, which are like fireworks displayed for a restricted neighborhood that now and then drop sparks beyond its boundaries, some questions arise that are not easy to answer, which the school-boy of the next century perhaps can answer much better than the wisest of us now. Is Count Tolstoï in accord with the spirit of the age? Does his theory and practice swim in the swirl of human evolution? Is he working to strengthen nineteenth century society? If he is not, though he be right and indeed a missionary among heathen, there will be few of us that follow him. There is but one legitimate end for the missionary. It is indeed a sad business to teach the truth to men, as Rousseau said, and as the Laocoön group has figured for generations. We simple minded folk had best let others play the heroes. And perhaps nobody knows whether it is a real, warning spectre or a projection of our own imaginations that, since Liberty has become a household word, is now crying its dread antiphon, "Equality," and threatens society with a downfall. Yet read what another Russian writer says.*

"Who are the recognized official defenders of society?

The Army and the Church.

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Suppose the day comes when the priests will entirely lose their hold on the people, when the soldiers will turn their guns muzzles down—where will society look for bulwarks then? Is it possible that it has no more reliable defense?

Certainly, it has such a defense, and it is nothing else but *talents*, and their representatives in science, literature, and art in its ramifications."

Surely, if this is so, the imparting of the talents of the older generation to the new is a serious business. And here is Count Tolstoï's oft repeated definition of culture, (I take that to be the English equivalent of his term) the growth of which in his people it is the aim of his methods to stimulate: "Culture is that action of man which has for its basis the longing for equality and the immutable law that it always moves forward."† And if this also is true, perhaps through the use of talents the dark spectre may transform into an angel of light that in the name of society calls the people to an uprising.

E. P. K.

COMMUNICATIONS.

To the Editor of THE ACADEMY:—

THE exhibition of composition work given in the April ACADEMY represents a very practical and fruitful line of work, quite ingeniously managed in this case. Yet it seems to me to be merely a minor branch of the comprehensive scheme that should be carried out. It is possible that such a scheme is in operation in the school cited. You make no explicit statement to the contrary; but a careful examination of the report leads to the inference that these daily exercises on miscellaneous chance topics constitute the entire effort at teaching composition. It is apparently set apart as a subject by

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*Second Appendix to Catalogue of the Verestchagin Exhibition. *Realism.* By Vassili Verestchagin. New York. 1889-1890.

†"L'instruction est cette action de l'homme qui a pour base le besoin de l'égalité et la loi immuable du mouvement en avant de l'instruction."

itself; while all those varied opportunities, indeed necessities, for composition work that arise constantly in connection with almost every branch of study, — in all sciences, in history, in literature, political economy, and civics, — are neglected. One hardly believes that this is the case; but the impression is given that no important work is done in these connections. Yet in all these departments, the composition work should be an organic part of the training, as representing and insuring a clear vigor of thought and knowledge.

Again, in these and other appropriate connections, two modes of execution should be taught; first, the rapid, impromptu sketch in bold lines, and second, the slower, more careful elaboration, dependent upon extended observation, reading and reflection. The specimens given by THE ACADEMY seem to be entirely of the first kind; some involving reading and reflection, no doubt, but all sketchy in style. Too much attention to this class of work induces a shallow habit of mind, and often a flashy style; the other habit, that of searching consideration of subjects, and careful artistic presentation, with a view to both large and small effects, is the consummation of training. This cannot be perfected in the high school, certainly, but it should be initiated there, and very early in the course.

Whatever view may be taken of methods in composition work, I believe that the chief drawback to them all is that omnipresent one, — lack of time. Information gained from many sources has convinced me that there are plenty of teachers who have excellent ideas on the subject, and the best will and ability to carry them out, if they only had time to do so effectively. All that can be accomplished, however, is a little surface scratching. The composition work is almost everywhere executed in a spirit of groaning on the part of both teacher and pupil, because it comes to them as the "last straw." (A recent country high school teacher's symposium on composition work left the doleful impression of a funeral.) Yet even the pupils who "hate" composition are sometimes heard to confess that it is a very useful thing, and would be a very good thing if it did not burden them so.

One cause of all this trouble is that teachers with very good ideas are often too conservative withal, or too timid, to take from other modes of training any of the time which they imagine is indispensably given to those; whereas, in many cases part of that time would be better spent in composition.

So much is true, yet, in the main, it is no longer the teachers or the pupils that need to be waked up; it is the school boards. More generous provision in teaching force and better adaptation of school programs to the purpose, are really needed, and should be insisted on, to the end that our good ideas about composition teaching may have a fair chance. After all, the teachers and especially the principals and superintendents are still to be blamed, if, with such strong convictions as they profess to hold, they do not compel the school trustees to meet the requirements in the case. F. E. A.

My dear Dr. Bacon: —

Will you kindly allow me a few words in reference to one point in your report of the annual meeting of the Massachusetts Association of Classical and High School Teachers, printed in THE ACADEMY for May? The report as a whole seems to me remarkably clear and correct, but in the reference to a paper by Professor Fay of Tufts College, on page 218, either you failed to catch the spirit and purport of my words, or else I was very unsuccessful in expressing what I had in mind. I had not written a word of my speech and could now reproduce hardly a sentence; but I had meditated thoroughly the several points of my argument and I am confident that the substance of what I intended to say was this: —

Professor Fay was asked to prepare a paper to be read before the first meeting of the Association representing Preparatory Schools and Colleges, on some of the prevailing defects in the preparation of candidates for admission to college. He was evidently surprised and embarrassed to find, from an extensive correspondence with college professors in different departments, that there was almost nothing to commend; that, in fact, there were only degrees of badness. I was personally very much amused, not because "these statements were so sweeping and savored so much of the usual style of criticism which secondary teachers are well accustomed to receive from the colleges," but because Professor Fay, evidently much against his will, was obliged to present to a body composed largely of schoolmasters, such a beggarly account of their work, viewed from the standpoint of the college professors. My opinion then was, and it has remained unchanged, that Professor Fay's paper was able, candid and just in its criticisms. It fell to my lot to follow him in the debate on that occasion, and I am sure that in what he said I found nothing to criticise on the score of unfairness or exaggeration.

Allow me to add that I feel the more anxious not to misrepresent Professor Fay, because I myself proposed the topic for discussion, and was one of a committee who invited him to prepare and read a paper on it.

Very truly yours,
Wm. C. Collar.

Roxbury, May 23, 1891.

NOTES.

The impression made on a disinterested observer by the debates at the recent meeting of the Massachusetts Classical and High School Teachers was that President Eliot represents progress towards adjustment of institutions to new conditions and that the teachers all but unanimously stand for resistance to change. President Eliot is finding that room must be made at the top of the educational series for a new element, — for specialization. The teachers continue to emphasize the desirableness of prolonged general culture. Boys are now prepared for college at nineteen. The teachers would have these youths for four more years go on with disciplinary studies having no reference to choice of profession. President Eliot would have young men at nineteen or twenty ready to begin their special training.

There can be no doubt of the genuineness of the present tendency to make more account of thorough professional training. The movement in this direction cannot be opposed, even though university authorities refuse to reorganize their courses of study. At that point in his development at which a young man becomes interested in his chosen life-work he should be set about it. Academic discipline ceases at some time with every youth to be the best thing for him. After this crisis is reached delay becomes injurious. Institutions should be organized so as to facilitate the transition from puerile subjection to adult self-determination.

President Eliot seems to us to see this necessity far more clearly than do the teachers. He knows that the public is insisting on more specialization, and on earlier opportunities for this specialization. He does not believe that this popular movement is a vicious one. He knows that the higher education abroad is far in advance of ours in this particular of early admission to professional studies. He sees that on top of the strata of our educational grades a new stratum is being deposited; and he knows that all the mass, including this new layer on the top, will have to occupy about the same space that the series filled before the new one was added. The problem with him is how to bring to pass compression of the lower strata. It is a most serious question. He suggests ways in which primary and grammar schools may occupy two or three years less of a child's life. This suggestion, rightly viewed, is not finding fault with the schools. Primary and grammar teachers are as much concerned as he is to harmonize the irresistible demands of the time with the conservation of the old gradings. He thinks that time can be saved in the education of a youth by judicious eliminations and more vigorous teaching in the lower schools. We believe that such a conviction is very wide-spread among thoughtful observers.

He also thinks that the collegiate course can be shortened. He does not ask the lower schools to submit to a compression that he refuses to apply to the college. In his recommendations he is certainly entirely fair and reasonable.

Hitherto the traditional college course has been wont to satisfy the ambitions of young men bent on getting the best possible education. This state of things is passing away. To the college course must now be added, even if a young man contemplates teaching as his career, some three years of special study. For all these years of preliminary work the average young man cannot wait, it is altogether wrong to ask him to wait. The average young man at twenty, or earlier, ought, for his own good and for the good of society, to pass to his special studies, whatever degree he thereby forfeits or foregoes.

If Prussian strictness prevailed in this country,—if no young man could begin medical, legal, or pedagogical studies without his A. B., our case would be intolerable. Luckily, if A. B. takes too long, there is with us no law compelling the young man to seek it, and the college course can be omitted by any one who, without it, still conceives himself ready for his professional studies. But we understand President Eliot to conceive an educational series that shall make it manifestly for the interest, in every sense, of the intending specialist to take it all. It seems to us that his aim is noble and disinterested, and that the conservatism against which he has to strive is only natural and by no means hopeless.

There died recently, in advanced age, a man who for nearly thirty years of his life had been superintendent of schools in a New England city, and who, in this capacity, had exercised his share of influence upon the theory and practice of his contemporaries. The nature of this influence may be surmised from his attitude towards the teaching of geography. Dissatisfied with the growing tendency to illustrate geography with maps and pictures, this superintendent published a catechism of geographical questions and answers, absolutely without illustrations, without anything whatever to distract the learner's mind from the bare task of committing answers to memory. To such a regimen in geography men and women now in their prime remember that they had to submit.

We thought of our ancient friend and his ancient ideas as we examined the other day the Exhibition of Geographical Appliances made by the department of geography of the Brooklyn Institute. Although this exhibition is by no means intended to serve principally an educational purpose, it is especially interesting to those concerned with the teaching of geography and its kindred sciences. Evidently the modern tendency to illustrate to the eye, to objectivize as much as possible, has not been repressed. The pupil need be no longer merely told that things are thus and so: he can now be shown it in graphic presentation. The memory is no longer appealed to as the sole trustee of geographical facts: the imagination, the judgment, the æsthetic sense, are all enlisted *with* the memory to make modern geographical teaching fruitful and memorable.

The exhibition includes displays of wall-maps, globes, and atlases, of books, pictures and casts. Besides the contributions of American firms, there are exhibits of the work of English, French, German, Swiss, Dutch, Swedish and Italian publishers. One good result of such an international exhibition is that it reveals to us our national inferiority in geographical science and in general cartography. Except our well-known Coast-Survey charts, the sheets of the Geological Survey, and the new State Atlas of New Jersey, American work looks poor and coarse beside that of foreign countries. Every self-respecting modern nation studies its own history, its language and literature, and it also surveys and maps its domain. The excellence of a people's maps is in proportion to its national spirit. Every intelligent family covets a good map of the country, the state, the county, the town or city. The studious tourist travels by maps. The educated walker must have his road-map and be able to lay his course by it, as a ship finds her position on the charts.

Yet that our government has been duly active in surveying our enormous territory becomes evident from the map numbered *one* in the catalogue. This is a most interesting presentation of the various degrees of thoroughness with which all parts of the land surface of the globe have been surveyed. Between the absolute blank of the unvisited countries and the deep color in which appears the territory of the culture-nations there appear several degrees of difference. The deepest shading, indicating the most thorough scientific surveying, covers a fair portion of the United States. Our country, considering its youth and its magnitude, stands well among the culture-nations in this respect.

It is in the work of the popular map-makers that our deficiency becomes most glaring. The foreign map is, generally, infinitely more *beautiful* to look at, and proves far richer in instruction when it is studied. In maps showing great detail for limited areas the foreigner far surpasses us. Every German family can have, at trifling expense, a *Heimaths-Karte*, by which the half-holiday outings of the children can be planned beforehand and afterward retraced. The traveled American knows the endless variety of tourists' guide-maps procurable in every town in Switzerland. Nothing of the kind is to be had in this country. The Apalachian Mountain Club has made a slight beginning in this direction. But it is easier today for an American possessing a few dollars worth of foreign cartographic matter to plan five-hour walks in Europe than it is to lay out such excursions in the suburbs of his own city. Maps for walkers are all but unknown among us. The walker is as yet unrecognized. We know of White Mountain hotels having beautiful mountains in their rear, but with no way of access to these mountains except over splintery rail fences. The Swiss hotel, the Swiss government, Swiss customs, all conspire to invite the walking tourist. In America, as yet, he is odd and unclassed.

It was a good idea on the part of the organizers of the exhibition to publish and to sell very cheap a catalogue of all the articles displayed, and to append to each description the name of the maker or publisher of the article, together with its price in American money. Teachers are thus enabled to see with what slight outlay most beautiful and interesting matter can be obtained for the furnishing of their school-rooms. An excellent map, an instructive series of pictures, an unfailing reference atlas, a handsome globe, are found to be within the reach of many schools that as yet may be but slenderly provided in this respect. Children should become familiar with our national map and with the maps of their respective states. If we love our country and are proud of our commonwealth, we should see to it that these maps are correct in detail, clear and legible in execution, and, last but not least, beautiful in appearance.

It is an interesting query whether out of the present wide spread interest in our older literature there is to grow any diminution of the prevailing respect for our established and fixed spelling. Young people are now, in immense numbers, reading the English of Chaucer, of the Elizabethans, and of the eighteenth century writers. It is no longer the fashion to modernize the spelling of these writers, except that of Shakespeare and Milton. Thus it comes to pass that the rising generation is becoming well aware of the truth that our present forms of words are modern, and that spelling was once phonetic, but is so no longer. Not only are boys and girls reading the older writers, but the newest dictionaries now recognize the early forms as well as those now current, so that with the new "International" Webster or the "Century" it is possible to read, without embarrassment, our literature from the twelfth century down. The dictionaries of course announce as obsolete forms no longer current; but this does not prevent any searcher for the spelling or the meaning of a common word from seeing the diverse forms of it once in use. Will the young people grow wanton over their spelling, and indulge perhaps an archaizing fad? It is conceivable at least that with new knowledge they should look with different eyes upon modern conventional strictness of spelling, and query how this strictness has come about. Formerly they revered the form of a word as an ultimate fact of the language, not subject to revision or even having a history. Now they know that the existing spelling has nothing venerable about it, and that it is really Mrs. Grundy who presides over the spelling-book. Moreover they cannot be kept from coming into contact with modern writers who treat our words with liberal disregard of conventional propriety. Suppose the young people should come upon some publication of Melville Dewey, who holds one of the highest educational offices in the country. Suppose they read Mr. Furnivall, the prominent English writer on Shakespeare and Chaucer, — whom, in fact, they will undoubtedly read when their literary enthusiasm has taken them a little beyond the elements. There is possible danger lurking in the most frequented paths of modern literature. We hear of one school which has introduced Mr. Earle's *English Prose* as a text-book; and Mr. Earle actually spells the preterite and the participle of the verb *read*, "redd," and ventures upon other equally striking peculiarities. Who knows but if the spelling-reformers only lie low, the now fashionable devotion to old literature may break for them the ice that they never could break for themselves?

Another interesting query is, — how bad a thing would it be if our present fixed spelling should give place to a loose spelling, and if diversity of taste in this matter should come to be tolerated. Would any great educational or social interests be imperilled? How would such a revolution affect primary education? These questions open up a large field of speculation, into which we do not propose to enter. Of one thing, however, we may be sure: should such a change be realized, it would come so slowly that the adjustments would be made without disturbing any one's habits. Conservative old people would murmur, but would finally disappear from the scene. The various publishing houses would vie with each other in getting up the neatest, shortest, most scholarly spellings. Inevitably, however, some rule would assert itself, some particular spelling would become dominant, and we should once more have a fixed spelling. That this would be nineteenth century spelling, however, is not for a moment to be thought of.

BOOKS RECEIVED.

A Middle-English Dictionary, containing words used by English writers from the twelfth to the fifteenth century, by Francis Henry Stratman. A new edition, re-arranged, revised, and enlarged by Henry Bradley. Oxford, at the Clarendon Press, 1891.

Everyone who has tried to read Middle-English with the help of the original *Stratman* will be grateful to Mr. Bradley for the changes he has made in this new edition. With the book in its present form it is possible to read thirteenth and fourteenth century English without annoyance and without waste of time. Thus the book becomes serviceable to that very large class of students who read for general culture and from motives of literary curiosity, rather than with merely philological aims. Not, however, that the scientific value of the work has been lessened by Mr. Bradley's changes. These changes have been in the direction of enlargement and re-arrangement; so that it is now easy to find the words and at once to *translate* them into modern English without further search.

The advantage of such a comprehensive dictionary as this over the small special vocabularies to separate poems or works is, of course, very great. It is the same advantage that leads the zealous student of Latin to look up his definitions and forms in the large lexicons, because these give him a conspectus of many facts, and offer him the opportunity for incidental observation and broader intelligence. The Middle-English forms are especially unstable. One likes to see their multitudinous shapes and thus to acquire the habit of recognizing them in their disguises. Moreover, if a word has various meanings, it is exceedingly desirable to view these meanings all at once, to connect them with the root, and to note their chronological and dialectal relations.

All this is possible to users of the new *Stratman*, and we believe is possible only to such. Maetzner's dictionary accompanying his *Altenglische Sprachproben* has for many years remained in its less than half completed state; Mayhew and Skeat's *Concise Dictionary of Middle English* cannot be thought of for a moment as a book fitted to satisfy the serious student, for the reason that no agglutination of many little vocabularies comes anywhere near making a dictionary; and *The New English Dictionary* is moving onward so slowly by reason of the vast scale on which it is projected, that it will become a sufficient dictionary only to the next generation. We are mindful of the excellent *Century* Dictionary, which extends backward over the Middle-English period, and which is marching with wonderful precision, according to its predetermined plan, towards early completion; and we confess ourselves daily resorters to the new *Webster* for the furtherance of our work no less in Middle than in Modern English. But both the *Century* and the new *Webster* lack something of the convenience and the compactness desirable to the student of the language in that peculiar transitional form to which the name Middle-English is applied. Even did they contain an equally full assemblage of forms and meanings, they are so bulky with their modern matter as to render rapid search impossible.

The work of Stratman covers a few texts dating from the twelfth century and extends to about the middle of the fifteenth, including Occleve, Lidgate, Wyntoun and the Promptorium Parvulorum. Thus the century of Layamon, Orm and the Ancren Riwle, and that of Chaucer, Langley, Wycliff and Gower are fully included in the scope of the work. Evidently it is one of the books which must forthwith find its place on the table of the English teacher.

Talks with Athenian Youths: Translations from the Charmides, Lysis, Laches, Euthydemus, and Theaetetus of Plato. New York: Charles Scribner's Sons. 1891. *Pages XX. 178.*

As the title indicates this book consists chiefly of selections from the dialogues named. Where omissions have been made the translator has stated in a condensed form the course of the discussion, yet in spite of this aid we suspect that the reader interested in the course of the argument may often find the omissions vexatious. The chief interest of the volume, however, as the translator seems to have intended, lies hardly so much in the philosophy of the selections, as in the charming pictures it affords of the noble Athenian youths with whom Socrates delighted to converse, and of the habits of Athenian society, so different from our own.

In the introduction the translator discusses certain aspects of Plato's teaching and his views in regard to the questions treated of in the talks, as well as the general setting of the dialogues. Besides the helps afforded by this preface about thirty pages of notes at the end of the volume are devoted to the explanation of the various difficulties and allusions of the text.

The version seems to be skilfully made. The translator by no means ties himself to the bald literalness which strives wherever possible to make the construction of the English clause identical with that of the Greek, but has been very successful in attaining that higher kind of literalness which, while turning the original into idiomatic English, reproduces very closely the thought and emphasis of the Greek. Printed in a form so cheap and convenient, the book ought to win readers among those to whom Plato is only a name.

There reached us, too late to receive extended notice, advance sheets of the programme of the Forty-sixth Annual Meeting of the New York State Teachers' Association, at Saratoga Springs, July 6th, 7th, and 8th. A copy of the circular is to be sent to every teacher in the state, and all who are interested in educational matters are cordially invited to be present.

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NATIONALISM FOR OUR PUBLIC SCHOOLS.

WALTER GEROULD.

It is unquestionably the belief of the American people that our free schools are the bulwark of our republican institutions and our hope for future greatness. As such, we have cherished them, fostered them as best we knew how, and pointed to them with the finger of pride. But, isolated as we are from other nations equalling or surpassing us in educational matters, we have reached a point of overweening confidence in our schools, as we have in many other particulars. We read of the superiority of the German school system, but, at heart, we cannot believe that it surpasses our own; its advocates, we feel, are only American discontents, proud to worship whatever is foreign. But any fair minded American who will take the pains to study the well defined system of education followed throughout Germany, and to witness it in operation, especially in the common schools, will come away with a clearer idea of what great results are attained in those schools, and how far short of what is desirable and possible our own fall.

The first aim in the improvement of our school system should be to secure wise, helpful, and impartial school boards. The duties devolving upon a school board are, in general, to prescribe the course of study, select text-books, elect teachers, enact rules governing the conduct of teachers and pupils, build school-houses, and administer the finances. The members of such boards are business men, serving without pay, and elected from year to year. But what we need is a board composed of men of liberal education, who have done practical work in teaching, and who are to be paid fair salaries in return for giving their whole time and attention to our schools, and whose tenure of office should hold during efficient service. It is not necessary that each town maintain such a paid board. I would advocate a system modelled after that of Germany, though not its exact counterpart. First, we should have a national board of education, presided over by a secretary of education, who should be a member of the cabinet; second, each state should have its state board, secretary, and supervisors; third, each city or town should have its school committee in the city or town council.

It should be the duty of the national board through its president, the secretary of education, to consider and bring before Congress such educational matters as need national legislation, — such as the diffusion of education in all our states, the giving of aid to such localities as are absolutely unable to help themselves, making education compulsory, fixing upon a general course of required studies, selecting text-books, preparing statistics, etc. I know that some of this work is now done by the Bureau of Education and the Commissioner of Education, but their work needs a larger scope and a fuller recognition than it now receives. In order to be assured of the quality of such a national board and to remove it from political influence, it should be composed of men, one from each great section of the country, as New England, the Middle States, etc., chosen from and by members of the state boards.

The duties of a state board would engross those now given over to city and town boards, namely, — the selection of teachers, the making of rules and regulations, the maintenance of schools equal in grade in all parts of the state, the establishing of school boundaries, grading, the oversight of schools and examinations, — in short, all similar duties, except those relating to the finances. To carry out the orders of such a board, supervisors should be apportioned throughout the state according to the needs of the various sections. Here again, for the state board and supervisors, only men of university education and practical experience in teaching should be eligible for election by the people. Communication should be constantly maintained between the national board, the state board, and the local school committees.

The last department in this system would be the school committee, whose only duties would be to act upon matters of finance recommended by the state board. We may sum up the advantages of such a system over our present arrangement by stating that the plan and execution of all school matters would be placed in the hands of men fitted for their office by education and experience, and who would give their whole time to the supervising and perfecting of our schools; and that all districts and all states would be brought to essentially the same degree of excellence.

When some such system has been adopted we shall have taken the first step toward placing our schools on a sensible, practical, progressive basis, and then be prepared for the second step, which is to secure teachers who are qualified for their work. What we need is more men and fewer women, — the eighty per cent of men and twenty per cent of women which tells the story of much of the success attained in German school rooms. Even in the primary grades the German schoolmaster is a marvellous success, outranking the schoolmistress in discipline, in the clearness of his conceptions as to what he wishes to teach and the logic of imparting it. His pupils become at once little men and women, — obedient and industrious, thoughtful, ready in their replies, and excellent talkers. The sterner nature of the man brings out the stronger qualities of the child. But not only must we induce more men to take hold of teaching, we must have men especially trained for this calling, as much so as for the practice of law or medicine. The state must provide suitable normal schools, and a course of instruction which will allow no pupil to graduate before the age of twenty-one. It should comprise studies in advance of those to be taught, and both the theory and practice of teaching. Not until a pupil has shown by examination his proficiency in the subject matter to be taught, and, by some months of actual school room work, his ability to teach and control a school, should he be granted a certificate by the state board. Graduates of universities of a standard acknowledged by the national board might well be admitted as teachers in the higher schools after a year of successful work.

But by such stringent requirements, should we not run the risk of frightening away even the few men who now have the courage to adopt teaching as a profession? The average salary of schoolmasters today is not above $1,000 per annum, and this to be attained only by the display of marked ability and in the face of keen competition. The schoolmaster and his family are expected to dress well, live in more than respectable quarters, mingle in the best society, travel, and to spend not a little on such educational helps as books, lectures, and concerts. Such requirements for admission to the profession as have been specified would make twenty-three the average age when the teacher would begin to receive even a small salary, and many, if not most of them, would then start off handicapped by a heavy obligation, or an actual debt, incurred for this long and expensive course of training. The question that now confronts us is — will young men, however earnest in purpose, dare to assume this obligation or debt with the problem ahead of them of supporting a family in even comfortable circumstances at $1,000 a year, on the average, for life?

I believe most thoroughly that the true, noble and successful teacher must feel called to his work, must feel within him the desire to help young lives just when they need and will avail themselves of that inspiring aid which may be the making of their whole future. Without this inner stirring of philanthropic desire no man has a right to accept the divine mission of teaching, than which even the ministry is less high and noble. But granting that the young man realizes the full worth of his high calling — is not the laborer worthy of suitable recompense for his exacting and most trying labor? And is it not likely that we lose every year many noble young men who would gladly adopt the profession could they feel assured of receiving salaries which would enable them to maintain their place in society, and still make a modest yearly saving? I am not pleading for salaries such as would induce men to seek the profession for that end only, but for such as the public are willing to admit are fairly earned by the average doctor or lawyer. It is a subject which should concern the public deeply, for on its solution depends in a degree the amount of good material which will enlist and remain in the service of the public schools. This is not a question of *compensation*, for what man could recompense the teacher who has turned the course of his boy's life from bad to good, from indifference to ambition, from what is worldly to that which will abide forever? Or, on the other hand, what teacher would accept dollars and cents as the full and only compensation for his daily care and his nightly thoughts of his boys and girls? His warm endeavors — they are their own reward. But the question for the public to settle is, how much does such a man and his family require to live comfortably today, with a fair margin left against the uncertainties of tomorrow, how much should *I* need were I in his position?

Let us have then, more male teachers, many more; let us demand that they be highly trained and duly qualified for their *profession;* and, finally, having such men, entrusted with the most precious interest of the home and the nation, let us pay them as justly as we ourselves expect to be paid in our pursuit of the law, medicine, engineering, or trading. By such measures, and by such only, can we expect to secure the services of a corps of true teachers, who are the alpha and the omega, the beginning and the end, the body and the soul of the school system.

These are the two ends for which we must strive, on which we must sooner or later insist, — qualified, professional school boards, and qualified, professional male teachers. Whoever thinks we have anything like this at present is but poorly informed concerning education in our country.

When these two ends shall have been attained the minor faults in our school system will quickly disappear, but, while waiting for this happy consummation, there are certain tendencies which are proving detrimental to our schools, and which, even under the present system, we should strive against.

We need a prescribed course of study, the same throughout the state, so that the opportunities of the country boy and girl may be equal to those of city children. It is safe to say that country children, with their sturdy bodies and freedom from the excitement and distractions of city life, would prove the equals or superiors of their city cousins if to them were given anything like as favorable opportunities in the way of good schools. We all know, however, what shifts these country schools are, and if a boy rises from them to excellence, it is not because of them, but in spite of them. And yet these children, attending for a few months during the year these apologies for schools, with inexperienced teachers who must hear each day a conglomerate of eighteen or more recitations, represent the greater part of the school population of the United States. When such a wide-spread evil is only too apparent, is it not time for the state not only to require, but to aid in raising these schools to a grade similar to that of city schools? Or does the pride and hope of the nation center in the child of the city alone?

Such a prescribed course, while insisting on certain studies and a fixed degree of excellence, should not be iron-clad, thus deadening all personality in teaching. But such a course must put a stop to our present foolish multiplicity of studies in the public schools. What we need is not a superficial knowledge of many subjects, but a thorough mastery of the few essential ones. We are now trying to make our pupils walking encyclopædias, intellectual cisterns, instead of scholars, thinkers, doers.

We should have accomplished a great reform if we could secure briefer text-books. Those now in use are so cumbrous that the principles, which it should be their sole purpose to inculcate, are lost amid the multitude of explanations and illustrations. They are generally so bulky that it requires hasty work even to skim them through, and in the very richness and abundance of material the pupil becomes hopelessly lost and bewildered. The model text-book should be brief, even to bareness, stating principles and giving only so much of illustration as is absolutely necessary for clearness. It should, of course, point out the possibilities of the study and insist upon the enlargement and application of its principles. This would secure two ends very much to be desired, — namely, more teaching by the teacher, and more talking, writing, and original work by the pupil. The present voluminous text-books tend to prevent both these results. Instruction coming from the master always interests pupils and makes a deeper impression on their minds than what they learn from books. Again, to hear the teacher state in a clear, logical, interesting way the principles and illustrations of a lesson, sets a model before pupils which is now-a-days too often lacking. The present method of assigning a lesson in the text-book, and then questioning concerning each separate fragment without reference to the underlying principles and the connected whole, is manifestly wrong. Too many of our teachers are tied to their text-books and have themselves no clear idea of what they are striving to teach. But briefer text-books will force the teacher to see the vital elements in the subject taught and to depend on his own powers to explain, illustrate, and expand. With such a model before them and deprived of the propping afforded by voluminous text-books, pupils would soon learn to think for themselves, and having learned to think, they would talk, and if they could talk, they would find no difficulty in writing. It is an undeniable fact, and a most discouraging one, that as pupils advance from grade to grade, they become, comparatively speaking, less and less able to think, to talk, or to write, until by the time they reach the high school it is generally difficult, and often impossible, to get them to do any of these things freely and correctly. But without these three acquirements, of what good is education? Is it not the parable of the foolish man, who having received his gold hides it where it benefits neither himself nor the world? Let us have, then, text-books which shall embody scarcely more than principles, teachers who can stand forth without a text-book and *teach* in a way that shall be a model to the children, and children who are trained first, last, and always, to think, to talk, to write.

This leads naturally to the consideration of another evil tendency of a somewhat similar nature, — namely, that we are not giving our children solid work in their studies. We are feeding them with pie and cake, instead of bread and beef; we are trying to make the road to knowledge smooth and easy, which it never can be; we are, in short, coddling and petting them, instead of asking, nay expecting, them to stand on their own feet as little men and women when doing their school *work*. I would not add in the least to the confinement and strain already imposed upon school children, — quite the contrary. But I would require sharp, serious work while in school, and then dismiss them. The German system, again, is worthy of imitation in this particular. There, pupils come to school to recite, all studying being done at home. The advantages of this system are that the pupil is confined to the enervating atmosphere and exacting discipline of the school room only as long as is absolutely necessary to recite and be instructed. His attention is held, and listlessness and mischief are banished. He is then dismissed, not to return until his next recitation, perhaps in two hours or not until the afternoon session. He studies in quiet at home, and plays as soon as his tasks are ended. Without any mischief-makers about him, and knowing that play comes as soon as work is over, he learns to work earnestly and rapidly. If, after a trial in this country, it should be found impossible for any class of pupils to find a quiet corner at home, then a general study room at school could be provided, presided over by teachers as they successively had a spare hour. This plan would, also, bring great relief to teachers who must now maintain a double charge, — first, to conduct a recitation; and second, to keep in order and at work those who are, or should be, engaged in preparing lessons. The number of teachers who are not obliged thus to conduct a recitation, with just half their power, is scarcely to be set down as a per cent. Daily marks, as another fatal weight to drag down and hinder a teacher from *teaching*, and as a false thing for pupils to strive after, and examinations, except as a *partial* test for promotion, ought to be done away with. I do not include under the latter written exercises, given without previous notice and used by the teacher simply as a gauge to ascertain what grasp the class has obtained over the subject in hand. But after thus removing the dread and nervousness attendant upon examinations and striving after rank-marks, after having cut out the most wearisome and hurtful of the hours of confinement in school, and after providing for quiet study hours at home or in a study-room, and increased time for play, — then, we could well demand better work on the part of our children. It has come to such a pass now in our country that a child is not asked to add 3 and 2 unless he can actually handle 3 balls and 2 balls, and so arrive at the tremendous secret. In geography, his unaided mind cannot rise to the conception of a mountain, a cape, and so on, but he must first spend days in making the same out of clay. It is assumed that he could not possibly comprehend the battle of Bunker Hill unless he be allowed to make a complete plan of Bunker Hill, the surrounding country, and show every regiment engaged. It seems to me that we are weakening our children, and insulting them in a manner, when we offer them so many helps, so many ocular demonstrations of simple things. German children are at least three years in advance of American children by the time they are ten years old, and the chasm continues to increase thereafter. What is the reason for this? Certainly I do not believe for a moment that American children are born with less wit than German children, — quite the contrary. But the latter are taught necessary things only, and that in the simplest and most natural of ways. If the matter is not clear to them, they must take it home, think over it, question their parents about it, or in some way master it. Then they come to school and present the subject entire, not bit by bit drawn forth by questions, and, at all events, they know it will go hard with them if they are not masters of the review lesson. If they fail, they must stand until the correct answer has been given and they have repeated it. Repetition is one of the secrets of success in German teaching. After the master has developed the first topic in a lesson, with the constant participation of the class, it is stated connectedly by some pupil; then the second topic is taken up in the same way, and the first and second are given together; and so on, topic after topic, until the whole is complete.

No great quantity is given, but it is all solid, necessary matter, clearly and logically developed by the class under the guidance of the teacher, and repeated again and again. Here we see how to make pupils think, talk, and write. Thus is laid the foundation that makes Germany preëminently the mother of scholars, and Germans the educated nation of the globe. Much adverse criticism has come of late from high sources because our children mature so late, because the children of the brightest and quickest nation in the world are not as advanced scholars at thirteen years as the children of the slower Germans are at ten. What shall we do? Give, in moderate quantity, only solid, necessary matter, stripped of all tom-foolery; develop the same with the class, placing for many years more of the teaching on the master than on the book; and then hold the pupil strictly to the footsteps of the master — developing, explaining, summarizing. If under such treatment he fails to learn how to think, to talk, and to write, he must be dull indeed.

In order to promote the efficiency of our schools, we need concentration, and, indeed, are tending toward it. Small schools must give way to large ones, and the teacher of all departments of human knowledge must yield to the specialist. It seems self-evident that a master who teaches only arithmetic, or history, or Latin, must soon become an adept, handling his subject with understanding and ease. It is not so much great stores of learning that are required in instructing children, as it is the time necessary to plan out and rehearse carefully every step to be taken in giving a lesson. But this is evidently impossible where a teacher has from five to ten subjects. The night would not be long enough for their preparation. The hourly change of teachers would also be a refreshing and stimulating thing for children. But in order to have these specialists, as well as fine, large buildings, helpful libraries, apparatus, gymnasiums, and other such desirable features, we must concentrate our pupils and teachers. It is the old story of coöperation; our single efforts are weak, but by union we become strong. There are throughout this country numerous small high schools and colleges carried on in the feeblest manner, deluding their pupils with the idea that they are receiving a "higher" education, and taxing the public or individuals heavily for their almost harmful existence. Let all such high schools be swept away, and let the small town pay the cost of tuition, and daily transportation if need be, for sending its handful of seekers after such education, to the nearest large town.

or city. As for third rate colleges, they would soon cease to be, if the state board refused to recognize them when they failed to reach the standard required for colleges. But having accomplished the concentration of city schools, of high schools, and colleges, and of country schools as far as is possible, a sturdy fight should be made against large *classes* to be instructed at the same time. Twenty to thirty pupils is as large a number as a teacher can handle with profit, and these, as before suggested, should be instructed in a recitation room, apart from other pupils. When this absorption of many small, poorly equipped, and poorly managed schools and colleges, by a comparatively few large, finely equipped, and well managed institutions shall have taken place, we shall have taken another long step toward the improvement and equalization of schools throughout the state and country.

If under this new order of things we find that our children need a physical, as well as mental and moral education, the aim should be at a wise supervision of home living and habits, and in provisions made for vigorous play, rather than at any system of feeble, distasteful, and often dangerous gymnastics performed indoors. I am thoroughly convinced that a game of tag, of foot-ball, or any other out-of-door game which causes the heart to beat, the lungs to dilate, and the pores to open, and at the same time occupies the mind and taxes skill and agility, is infinitely superior to any system of indoor gymnastics, especially when compulsory. Once every school had wide and tempting play-grounds; now we apportion a few hundred square feet of cinders or concrete to hundreds of children, — sometimes allow them no room at all, — and then lament because their cheeks are not rosy, and they are becoming bundles of nerves. Do we flatter ourselves that ten, twenty, thirty minutes a day of "rhythmic exercises" in the school room, with its worn-out air, will restore the bloom and steady the nerves? If we do, it is only flattery without a grain of truth to support it. A large playground, an hour set apart in the afternoon for vigorous running games (for girls as well as boys), and a sympathetic master to assist, not direct, to stimulate and, if need be, to force the sluggards, this is the simple and natural method of securing sound bodies for the homes of sound minds. Add to this, supervision of the home habits of study, eating, sleeping, and so on, by a duly qualified school physician, and the cry of overwork would soon die away. Children are not overworked, — they are *underplayed*, or else poorly cared for at home.

It is scarcely necessary to add that if we are to be a universally well-educated people, we must enforce education on all children up to the age of fourteen, and bring all educational institutions both public and private to an equal grade of excellence. And finally, we cannot afford to be niggardly in support of our schools. Most people believe that the schools are treated with unbounded liberality, but how can they think so in view of the fact that scarcely a city in the Union can lift up its head and say, "we have decent accommodations for ninety per cent of our children," and when girls occupy positions as teachers which pay so poorly that a man positively could not support a family upon any except the very best of them? Does this indicate unbounded generosity toward either pupil or teacher? That the changes in the school system which I have mentioned would increase or diminish present expenses, I cannot say. Nor should it concern us greatly. We love to boast that we are a rich people, and we are proud to say that education is the keystone of the Republic. Where, then, can we better afford to spend our surplus, or for what better afford to increase our taxes by a few cents on the hundred dollars, than in behalf of our public schools? Money alone will not accomplish the improvement. We must have the sympathy and coöperation of the public, and bring to the service the best that the talent of the country affords.

That our few best schools have already attained a high degree of excellence and are exempt from many of the defects which I have specified, is true. But they are not representative of the schools of the nation, and, moreover, their improvement has been in lines quite parallel with many which I have advocated. It is time, therefore, to put aside our self-content and self-conceit, and to construct a school system, based on the best the world has yet produced. We need it, we are capable of making it. Let us have it.

THE CORRECTION OF SCHOOL COMPOSITIONS.

S. THURBER, BOSTON.

It is to be taken for granted that the compositions handed in to the English-teacher have been written under advice as to choice of topics and under admonition as to treatment and execution. Thus the teacher is to be credited with a genuine curiosity regarding his own success in his endeavor to lay down principles. He cannot possibly avoid an interested scrutiny of his pupils' work. If he is teaching with the aid of a text-book of composition, he may have heard carefully formulated rules recited with perfect correctness; but whether the pupils can apply the rules in concrete cases remains still the vital question. If he uses no printed manual, but has sought to announce, in the most impressive ways he can command, the principles that are to be followed in composing, he must, by every token, address himself to the task of examining his compositions as the supremely important and crucial part of his teaching. If his pupils neglect his admonitions, the fault is his: he tried to enforce his teaching so as to make it operative, but he did not succeed; he must try again, in new ways, with more vigor, and with fuller explanation. It is a pitiful sham to be able to recite pages of a rhetoric and not to be able to write a correct composition. To translate rote-knowledge into practical skill is the teacher's highest and most essential function. In his compositions he finds the evidence of the success or the failure of his efforts to fulfil this function. To lecture passive audiences is the lazy teacher's delight: to talk about good writing is easy, but arid and fruitless. The English-teacher will read his compositions, and will read them all, with the zeal with which the scientist tests each new fact that bears upon his darling theory. Unless he knows what his pupils do in their writing, he will not know what to do himself in his teaching. Routine teachers pity the English teacher because he has compositions to read: but how is it with the Latin teacher, whose pupils cannot express original thought at all in their new language, — and who, year in and year out, listens to nothing but stammerings, and never counts on reaching any more lofty goal than getting pupils through an examination?

But there is also a good deal to be said in behalf of those who pity the English-teacher's drudgery. The English-teacher often makes his burden unnecessarily heavy by passively accepting a standard of minuteness and thoroughness in his correcting which perhaps a little thought would cause him to modify in a considerable degree. Over any single composition it is possible to linger, with touch upon touch of improvement, during an indeterminate period of wearisome toil. Nothing in juvenile composition will pass the martinet test of formal correctness. There always remains a possible better even after the most thorough revision. One must draw the line somewhere, and, when all is said, acquiesce in much juvenile crudity and awkwardness. The English-teacher must "correct" a dozen compositions in the time he *could* give to one. This work becomes pitiful drudgery only when he cannot make up his mind to *let go* contentedly and learn to summarize instantly. The gift of self-sacrifice, which women possess sometimes without due correlation with a perception of objective conditions, often leads teachers to impose upon themselves beyond the needs of the occasion; and then they make drudgery for themselves, and become objects of commiseration with their excessive extra work.

The writer has occasionally caught himself correcting some of the most famous English classics. This has happened when, in reading a composition, he has failed to notice quotation-marks, and has gone on correcting the prose of Ruskin or Irving, unconscious that opportunity for correction has ceased. The fact in such cases has usually been that the same need of petty amendment existed in the classic as in the juvenile diction. A teacher who knows his rhetoric can give points to the most illustrious writer. What gave the writer his fame was not correctness: his greatness is not diminished by his lapses from formal propriety. There is no end to possible correcting. One teacher finds another's correcting slight: a third would go still further. Where it is wise to stop is the question, this being purely a matter of business and not a teachers' race.

The faithful teacher will of course give all possible attention to the individual pupil. But in gregarious teaching it becomes absolutely necessary to make, for many purposes, a unit much larger than the individual. This is true especially in correcting compositions. It is not needful to *write in*, upon each manuscript, all possible censures and suggestions. Faults must be reduced to types, and these types must be brought up and discussed in class, with illustrations drawn from the compositions. Where a fault appears in any pupil's work, the slightest possible mark against it will indicate to the writer that something, at that point, comes under censure. It will be better to leave him to wonder what this something is than to tell him outright, because if he is told outright, at least if no other element of impressiveness is added to the occasion, he will proceed straightway to forget the whole matter. The pupil may therefore be left to surmise what you would correct at any point, but may be told, with all his mates, that if he will attend carefully, he shall hear announced the general principle which he has violated. When this principle is announced and illustrated, he should, if he recognizes that his fault is being described, be held to the duty of raising his hand and offering his *peccavi*. Such confessions enliven an exercise. Moreover, they hold the attention very effectually. A pupil who recognizes his own particular fault from a general description of that *class* of faults does well, and deserves all praise. The teacher may have his little list of names of pupils who should confess under certain rubrics. If these pupils do not confess at the opportune moment, they may be accused, in the mild pedagogic way, of neglect or of lack of insight. The all-important thing is to keep the class on the watch during the composition exercises. Anybody can make one interlocutor listen. It is for the teacher to make forty interlocutors listen like one.

There is no need of cleaning up all discoverable faults on the occasion of any one set of compositions. The wise teacher knows he cannot convey in any hour more than a very limited amount of instruction. It seems hard, perhaps, to let defects go unnoticed. But this must be done every day in school, and it must be done no less in composition correcting than in other departments of work. An example in algebra must be solved with entire accuracy. But who shall say that a recitation in history shall include all utterable knowledge of the subject in hand? The composition exercise is analogous to the history lesson, and not at all to the recitation in algebra. Composition shades off into an infinitude of correctible or improvable points. To mark the stopping place too far out is to throw away valuable effort.

Hence it is proper to advise teachers of composition to avoid over-refinement in correcting. The object of the exercise is not to produce excellent essays, any more than it is the object of the drawing lesson to produce fine pictures, or of the manual training lesson to produce fine boot-jacks or clothes-pins. The object of the composition exercise is to train the young people to conscious care in their writing, while acquainting them with the dangers into which writers are apt to fall. Especially is it not the object of the composition lesson to produce, from juvenile pens, matter written with the formal and conventional propriety of expression that characterizes the written work of scholastic adults. Popular writing has more ease and naturalness than the usual writing of trained teachers. The writing of the young people in school often has individual traits of simplicity and unconventional waywardness that the large-minded teacher may easily tolerate. Too much pruning of that which is genuinely characteristic of the pupils at their age and with their views of life may have a sterilizing effect, wholly lamentable in its influence on the development of their power of expression. When a writer attains fame, his earliest efforts are searched for and printed with his works, sometimes to his discomfiture. Longfellow's, Lowell's, Wordsworth's early poems are distinctly juvenile. Our pupils are not geniuses, and their work for us is juvenile work, almost always without the hopeful mark of nascent greatness. Our treatment of young pupils' composition should be gentle and paternal, or even grandfatherly. For no other work done in school grows so directly out of, and so faithfully represents, the entire sum of all the qualities of the pupil's mind, its opportunities and its limitations, its hereditary and its acquired capacities, as does composition writing. I would almost as soon ask a little boy, sitting in a chair too high for him, to rest the entire sole of his foot squarely on the floor, as ask him to write a stronger, a profounder, a wiser composition. Girls will write girlish thoughts in girlish ways, and boys will write boyish thoughts in boyish ways; and all will write partially and crudely on subjects which they do not thoroughly comprehend.

Nor do these remarks apply merely to the matter, the content, of pupils' compositions. The power of expression is strictly proportioned to the power of origination. The young vocabulary is small, and the young command of phraseology still slight. The resources of literary English are exploited only with that slowly gained acquaintance with literature which implies growth both to physical and to mental maturity. Hence the English teacher will expect but little power of expression, as well as but little power of thought.

What the English teacher may expect and strictly hold his pupils accountable for is of course determined largely by antecedent school work. What they have surely been already taught they may be expected now to know and be able to put in practice. Additions to previous knowledge are to be made with due regard to the rule of *ne quid nimis*. Excessive instruction defeats its own ends. The teacher must feel his way very delicately. Better confessedly do nothing for an hour than spend a noisy and laborious hour to no effect.

All pupils may, on all occasions, be held to correct spelling of all names, common or proper, that they venture to use. To this end they have their dictionaries and other sources of information. It is unpardonable in a pupil to spell wrongly the name of a person or of a place. It is astonishing how the most careful pupils will misspell the name *Macaulay*, which they have seen almost daily for half a year. So they misspell the names of their teachers and their classmates, to whom they might have appealed directly. The almost ineradicable vice of careless spelling is one to which even grandfatherly indulgence will show no mercy. Not that any person can undertake to spell all English words and names correctly offhand; but everyone, with a dictionary at his elbow and with all name-lists accessible, may surely be charged with neglect if a misspelled word creeps into his work and remains there uncorrected for your eye to detect.

As regards the use of capitals, sometimes the majuscule, sometimes the minuscule, is *de rigueur;* sometimes either may be used without offence. Here it is the part of the teacher to know when to be exacting and when to be lenient, when to require and when to advise. In the high school it is time to bring to the knowledge of pupils the fact that very many things in human life cannot be brought under the categories, absolutely right or absolutely wrong. Much must be left to discretion and taste.

The same holds true of a large part of punctuation. Punctuation varies in different writers and at different periods. Its sole purpose is to facilitate the understanding of written speech. Punctuation that is useless cannot be justified by adducing from somebody's treatise a rule that would seem to require it; and punctuation that misleads or obscures is obviously heinous. As to correcting punctuation, there is perhaps no better resource, with regard to the mass of slight errors found in a series of compositions, than to strike out the superfluous points and insert any needed ones. This is all there will be time for in the great bulk of the faults. But a few very badly pointed sentences can be given to their writers to be written out on the black-board before the class-hour, and these can be rapidly revised by the class, while you give your reasons in case none of the pupils can do it for you.

Faults of grammar, in the choice of words, in arrangement, can usually be brought out and corrected in the way hinted above, — by leading pupils to confess their shortcomings when their attention has been called to the fact that a fault exists and they are made to put themselves on the watch for the calling of the rubric under which their case seems to them to fall.

But the bulk of the faults to be found in a series of compositions are faults of feebleness rather than faults of going astray. With these not much can be done. The reason why but little can be done with these faults is twofold. First, they are innate: you cannot go back of the pupil's culture and capacity. Secondly, these faults of feebleness are too numerous and indistinct: you cannot dwell on them without prolonging the exercise into tediousness. All is lost when tedium supervenes. Pupils' faults are not interesting, either to you or to them. As to feeble compositions you can do but little except look and pass on.

Altogether better than dwelling on inevitable defects is holding up examples of excellence. The two or three strongly written or well ordered compositions can be read by their writers, and you can dwell on the excellencies of these. Call attention to good features, as, e. g., to good paragraphing, good choice of words, neatly constructed sentences, compactness of phrase, freedom from conventional and hackneyed expressions; or have good, plain passages from Macaulay, Ruskin or any other writer of exemplary English, read and praised, and that, too, distinctly for the qualities you wish to inculcate. If you have had compositions on the *Desirableness of Checking Immigration*, find some article of superior clearness on that topic in a newspaper, and have it compared with your pupils' work.

Professor Hill "is amazed" "year after year" by the "tedious mediocrity" of the written English work done by applicants for admission to Harvard College. Why should he be amazed? The writer confesses that he is amazed at Professor Hill's amazement. Every adult person much given to reading should, by the time he reaches years of discretion, have ceased to be amazed at any amount of tedious mediocrity in current printed literature. The writers of the newspapers and the magazines, of the novels that swarm upon us, and of the other books that for some reason or other we have to read, are presumably adults, writing on their own themes, in their comfortable rooms, without stress and strain of a time-limit, and with no important issue depending on the character of what they produce. Yet they deluge the world with *tedious mediocrity*. Teachers should not be moved by Professor Hill's amazement. Only he can be taken to task for asking the world's attention to his tedious mediocrity who has, unsolicited, thrust his mediocrity upon a public that had made no call for it and had created no opportunity for its appearance. Applicants for admission to college find themselves compelled to exhibit the content of their minds, on sundry topics imposed upon them, whether their minds have dwelt on these topics long and interestedly or not. The presumption is all against superiority of product. No teacher is amazed at the mediocrity of young people's work done in such circumstances.

THE NEWSPAPER IN THE HIGH SCHOOL.

From the cradle to the grave the totality of our education lies in the relation of man as an individual to man as a species or race. In the family to the age of five or six years, the child has his first and important lessons in conduct toward his fellow man. In the school these lessons are continued and, in addition, he learns the phases of human life in the past and present and the ideas that underlie our civilization. With the close of school life, he enters upon the third stage of his education, — the practical relations with his fellow men. Here he limits himself to a narrower sphere, to secure greater skill in some one of the activities about him. A fourth stage of a man's education is that of his political relations with his fellow men, and with the collective individuality of the state. Another phase of his education is the religious or moral, a phase that underlies and transcends the other, for in it the individual as a person learns his relation to the absolute Conscious Person.

As all education, then, has for its object the relation of man as an individual to man as a race, whatever collects the facts of human life, the experiences of mankind, and distributes them again to the individual man, is an educational agency. Such is the printing press. Without it, modern education would be impossible. There is little development when each man is limited to the experiences of his own life and those of a few neighbors. The printing press has preserved for us the wisdom of the race. It enables the individual to interest himself in what is widely separated in time and place, and become habituated to thinking of the great individualities of the world, corporations, states, commercial enterprises and national undertakings. As a result we are approaching a common ideal standard of humanity by the elimination of local peculiarities, caste, and narrow self-interest.

It is time for teachers to consider the newspaper, and its use as an agency in the second stage of our education — the school, more especially the high school. If we compare the small quarto sheets of one hundred years ago with a few columns of news from one to six months old, with one of our modern dailies with its pages of news gathered from all parts of the world on every conceivable topic of human interest, we can form some conception of a century's growth in journalism. The marvelous power of this agency in guiding and controling public opinion, has imposed unforseen conditions upon the legislature, the bench, the pulpit and the school. The newspaper has taken the place of the public and the private library and constitutes the sole reading and source of information of the average man and woman of our communities. When we consider that the Commonwealth of Massachusetts, in its free text-book law, has virtually removed all school books from the household, and by so doing, has taken the early sources of information from the graduate of our schools, we can readily see that the newspaper becomes practically his only reading, and his only means of contact with the thoughts and experiences of the race, either past or present. The actual newspaper is a money-making enterprise pure and simple, and in the pursuit of money and in extending its circulation, it is often like Fama of old, equally tenacious of what is unreal and false and of the truth. Yet the newspaper has often been called the pulpit of the nineteenth century, and many of our papers maintain a high standard of moral worth and adherence to the truth. If several such papers are accessible to the teachers and pupils of our high schools, what use can be made of them as an educational agency?

I. The pupil can be taught to find quickly and read in a newspaper that which is of universal and permanent interest, instead of that which is local or ephemeral; that which is elevating instead of that which is debasing. These topics can be utilized for themes in the composition exercises of the school.

II. The newspaper can be utilized to bring the school into contact with the activities of the community and to show the practical application of school studies in the affairs of the world.

III. The newspaper can be used as a fruitful source of suggestion and information in the study of the duties of citizenship, especially if supplemented by discussions, debates and essays.

IV. With certain limitations, the newspaper can aid the teacher in the moral education of his pupils, in forming just conceptions of sin and its consequences, the rights of persons and of property, truthfulness and other virtues.

To teach a pupil to discriminate between what is of permanent value in a newspaper and what is sensational or mere gossip, is not an easy task. Yet in view of the character of most newspapers and their omnipresence, it is of the highest importance that the pupil be early taught to weigh and consider. The usual headings of newspapers greatly facilitate this work. It is possible to get all that is really needful to know in most of our dailies in fifteen or twenty minutes. To read all that they contain is a waste of time, a great hindrance to protracted or continuous study, and a weakening of the memory.

To secure variety, I have usually assigned American news to the first year class, foreign news to the second year class, scientific news to the third year, and political and literary news to the fourth year class. The two lower or younger classes have a wider range of subjects, but the two upper have a wider range of papers and periodicals. The pupil is allowed to be his own judge of the permanent value of the news item that he has selected. On the day of the week appointed for the class to gives these news items, the pupil stands in his place before the school and in his own language gives the substance of the news of his selection. At the close of the exercise, lasting usually ten or twelve minutes, the other members of the class hand in written abstracts, and on the following week are expected to give the items orally. Composition writing, that perplexing yet important school exercise, can be shorn of much of its terrors, if the subjects are selected from the newspapers. It may not be feasible to preserve in composition writing the division of topics that I have just suggested, yet it might lead to a systematic or graded work in themes. The pupil's future composition work after his school days are over, will generally be confined to letter-writing, or contributions to the newspaper. The brevity and clearness of the newspaper style merits the attention of the high school teacher. The publication by the pupils of a monthly school paper is an excellent way to acquire this style, of course under the supervision of a teacher.

The school represents the second stage of a man's education. He then learns, or ought to learn, the ways of society outside of the family, the phases of life around him, the occupations, the means of intercommunication, the ideas that underlie our civilization, its social and moral structure. He has seen to some extent the what, or results, of these activities. Now he should be taught the why also, the forces, powers and processes that underlie the what. Herein the newspaper is a grand auxiliary in giving pupils the what and the why, in bringing the school into contact with the busy world around us.

As the pupil reads the newspaper he will see how closely his history, geography, and physical geography are bound together, and how inconsistent it is to separate them in school. He will see how science, mathematics and literature are bound together, and how each of these in their interdependence is directing and modifying these forces. It is somewhat difficult for most pupils to see any connection between their studies in school and the occupations of their fathers and relatives. Unfortunately the connection is also rather indefinite in the average teacher's mind. Still more indefinite is the relation of these studies to each other, the school curriculum often clouding this relationship and sequence. This is an intensely practical age, and the *cui bono* is remorselessly applied. The pupil comes into the high school with this question upon his lips, and it is the duty of the school to answer it candidly, to make it clear to him that he is preparing himself directly for the practical work that is awaiting him in the third stage of his education. What better aid can the teacher have for this work than a good daily newspaper?

Today our sovereign is public opinion. To this court of last resort are referred all questions pertaining to the state and nation. Is this public opinion well informed, independent in thought, free from bigotry and partisan blindness? The prominence of the political "boss," the political machine, the corruption fund, euphemistically called the election expenses, must compel us to answer, no. I am not posing as a pessimist, but I cannot help thinking that these agencies are sapping our political life. Their activity implies indifference, ignorance, or venality in the citizen, and his incapacity to think for himself.

The unscrupulous partisan newspaper, as well as the demagogue, can thrive only where political ignorance prevails. The high school is the proper nursery for the independent, thinking voter. The state very justly expects the schools to teach the duties of citizenship. With the proper use of a newspaper of high character, that in its discussions and newsgathering observes the ordinary amenities of life, is liberal and independent, an intelligent teacher can do much to correct political bias, or religious bigotry, and teach the duties of citizenship to those who in a few years will be called on to exercise their political rights. This instruction is best given in a debating society. The school, or a portion of the school, can be organized into a debating society, or deliberative assembly, and questions can be discussed in the usual parliamentary manner. The pupil, if possible, should at times be induced to speak in favor of questions and measures opposed by his party. He may discover that the saints are not always with the party of his father. In short our efforts should be directed to making him a student of our political history, not a politician.

Most teachers are now agreed that the formal teaching of morals serves no useful end. They prefer that the lessons be given indirectly as the occasion may offer. Shall we teach morals from examples of self-denial, self-sacrifice, devotion to truth, the recognition of personal rights, or shall we portray the hatefulness of the opposite vices? Most of us, I believe, think that familiarity with vice is dangerous to the young. The portrayal of its various hideous forms is in the highest degree hurtful to the plastic minds and and morals of young people.

So far, the moral character of the newspaper has not been considered. Few newspapers are free from mere idle gossip, gross personalities, defamation of private and public men, from partisan malice or petty spite, but we can find even on these pages glimpses of the noble, the pure and the good, and these can be used with good results in moral instruction.

The newspaper, such as it is, fraught with danger as it is, can still be used in the all important work of teaching morals. We can find concrete examples of devotion to truth, self-sacrifice, benevolence, in our best papers that will inspire our youth. The portrayal of sin and its consequences, so clear in the sacred Scriptures, can also be found in our newspapers and utilized by the teacher. Great or rich criminals, peculators and politicians, men who by their influence and wealth escape the law and the courts, cannot escape at the bar of public opinion.

The newspaper enters into all the stages of a man's education. It should, therefore, be part of the educational outfit of every high school. The reading room, containing some of our best dailies, scientific and literary journals, is as important an auxiliary as the reference library. The cost in any case cannot be great, but can be justified by the additional power for good it will place in the teacher's hands, and the training it will afford to the future man, citizen and Christian.

HISTORICAL AND POETICAL MATHEMATICS.

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John Ruskin has divided "art generally into historical and poetical, or the art of relating facts simply, and facts imaginatively." This distinction may be applied also to mathematical discussions.

The historical discussion of a mathematical topic begins with a proper definition, and, by the use of axioms and of principles previously established, expands and develops the idea, and discovers its application under various conditions. If new principles appear they are seen to spring naturally from the original definition, as all the parts of a tree are developed from the original germ. This kind of discussion may be called "a relating of facts simply."

The poetical discussion is liable to digress from the simplicity of truth, in pursuit of various fancies. Or it may substitute a new principle for the original idea, instead of presenting it as an outgrowth of that idea; the proper connection and dependence are lost, and imagination takes the place of reason. This may be called "a relating of facts imaginatively."

We quote again from Ruskin some expressions, applied by him to landscape drawing, but which are very well adapted to our use. He says, "it is always wrong to draw what you don't see. This law is inviolable. But then, some people see only things that exist, and others see things that do not exist."

Suppose that we begin with ordinary concrete problems, in addition, subtraction, multiplication and division, such as these: If we add three apples and two apples what is the sum? If we take three apples from five apples, what is the remainder? If we give to four boys three apples each, how many have we given away? and, If we divide twelve apples into four equal parts, how many apples will there be in each part? A very safe way to make a perfectly truthful analysis of these concrete problems is to have the apples right there where you can see and handle them, and let the four boys stand very near by so that each one can easily get hold of his own part, then the work will proceed with historical truthfulness.

But if it be not possible actually to see and to handle the objects named, we must proceed in the analysis just as we would do were the objects actually before us and we were able to handle them. This brief statement covers the whole ground occupied by elementary exercises in arithmetic. On this ground we rarely find any instructors or authors who see things that do not exist.

We introduce now an example of a higher grade, *proportion* explained by the principle of *cause and effect*. Fifty years ago Thomas C. Upham published his Mental Philosophy. Mr. Upham says, "The number of relations of objects, of things, and of ideas is very great." Among those named in his work are, identity and diversity, degree, proportion, place, time, and cause and effect. Take notice that cause and effect and proportion are different relations.

About twenty years later an author of arithmetic had a vision. He saw a thing that does not exist. He saw that "every question in simple proportion involves the principle of cause and effect," and further, that proportion cannot be properly explained except by the principle of cause and effect. Now Ruskin says, "It is always wrong to draw what you do n't see." But he says again, "If some people really see angels where others see only empty space, let them paint the angels, only let not anybody else think that he can paint an angel too on any calculated principles of the angelic."

This author of arithmetic may have reasoned in this way. Wherever we find the relation of cause and effect, there we find also proportionality; hence wherever we find proportionality there we shall find also the principle of cause and effect. Very bad logic. As if one should say, every member of the legislature is a gentleman, therefore every gentleman is a member of the legislature. Some propositions cannot be converted in this way. Since this fallacy was written and, by means of a popular book, was planted in every schoolhouse, a generation has grown up and has been educated into a false understanding of those valuable words, cause and effect.

Is it true that, "Every question in simple proportion involves the principle of cause and effect"? Let me illustrate by examples. Suppose that a friend of mine should meet me on the street and should say, "How many dollars have you in your pocket?" and that I should answer, "The number of dollars in my pocket is just the same as the number of fingers and thumbs on both your hands." Does this answer declare any relation of cause and effect between my friend's fingers and the money in my pocket? Or, if I should say, that there are three chairs in this room for every two persons in school, are we to assume from what I say that three chairs are the *cause* of two persons? The truth is that the relation proportionality often exists where the relation of cause and effect does not exist.

For a further illustration, consider the whole range of problems in pure mathematics. There is not found in this line of study one example involving the relation of cause and effect. We may say of any triangle, "The sides are proportional to the sines of the opposite angles," but we cannot properly say any part of a triangle is the cause of any other part. Whoever can speak of cause and effect in comparing the parts of a geometrical figure, must ignore the true meaning of those words.

Another author has modified the statement above quoted by saying, "Every problem in proportion may be considered as a comparison of two causes and two effects." Yes, it may be so considered. But which is the better, a discussion which is simply truthful — the historical discussion, or that which is partly imaginative — the poetical discussion? Is it not true that great injury has been done by this kind of poetical instruction?

The poetical method has also been applied to the explanation of negative quantities, and here we seem to be wandering far away from the plain path into the misty and uncertain regions of romance. The signs plus and minus have their own simple and original meaning, addition or subtraction required. (" We cannot properly prefix those signs to any quantities except in teaching a problem in which there are conditions requiring the addition or subtraction of those quantities.") But the interpretations of results will be various, as the problems analyzed are various. If subtraction is required there is always a reason why. If there be no reason why, then the sign must not be applied.

We are not quite safe in saying that these signs mean "*quality*," and that the two signs mean opposition in respect to quality. What are the qualities of a silver dollar? Weight, hardness, divisibility, fusibility, malleability, certain chemical affinities, a certain color or lustre and so on. The signs minus and plus cannot indicate any of these qualities, nor, indeed, any other qualities, except that for some reason addition or subtraction is required. Now five silver dollars are just as real when required to be added as when required to be subtracted and vice versa. We ought not, then, to say, with a recent author, that " real dollars cannot be negative." Why not?

Suppose that I am employed to keep the cash book for a business establishment. There will be money to be received and money to be paid out. The silver dollars received are realities, and the silver dollars paid out are also realities. Dollars received are to be added to the pile in the cash box, and dollars paid out are required to be taken away, that is, subtracted from the pile in the cash box. On the cash book these items are positive and negative quantities. Dollars stored in a vault are neither positive nor negative until for some reason they are required for use.

But the poetic imagination took a still higher flight when one author saw, or thought he saw " a new series of numbers," " never used in arithmetic," by means of which certain impossible operations can be easily performed. Having had this vision he must publish it. Ruskin says "If some people really see angels, where others see only empty space, let them paint the angels, only let not anybody else think that he can paint an angel too," when he does not see it.

Every intelligent human mind has, among its conceptions, a series of numbers, starting from unity, all the following numbers being produced by repeating the unit. There is one series of numbers and only one series conceivable by the mind.

When we discuss a concrete problem these numbers may be applied to the enumeration of material units of any kind. They may be applied to units of length, or distance, to distances extending in opposite directions or in the same direction, or in any direction. But if anyone says that a new series of numbers, "not before known" is used in algebra, calls them "algebraic numbers," says that "these numbers are never used in arithmetic," says that "in algebra we can subtract a greater number from the less," but that "in arithmetic this operation is impossible," I call this poetical mathematics.

Let us quote one more expression from Ruskin. "What is impossible in reality is ridiculous in fancy." A good maxim for a mathematician, as well as for a painter. We are not intending to say that the conclusions made by any author are not true, when rightly understood, or that the assumptions made are inconsistent, but this we mean to say, that it is much better to hold fast the original definition, and to show that every principle developed in the discussion, and every interpretation of a result, is an outgrowth of that definition.

Let us call to mind the definition of a negative quantity, given in the year 1831 by Jeremiah Day, afterward president of Yale College. "A negative quantity is one which is required to be subtracted," and "A positive quantity is one which is required to be added." It did not occur to the mind of President Day that the explanation of negative quantities would require the invention of a new series of numbers.

Suppose a cashier is required to pay a bill of $50 from the money in a drawer, and finds only $40 in the drawer. He has orders to take $50 from $40. He will do the best he can, whether he consult an arithmetic or an algebra, or only his own reason. He will pay over the $40 and report to you that $10 is still due on the bill. Ten dollars yet required to be taken. The remainder in the language of algebra is minus ten, — a negative quantity. This explanation is truthful, simple, historical. The sole aim and purpose of all algebraic work is to discover the truth.

In the year 1836 Professor Charles Davis published his Analytical Geometry. He showed us, in a clear and natural way, how to construct a straight line, represented by a-b, when b is less than a, and when b is greater than a. He did not require a new definition of a negative quantity, or "a new series of numbers" but proved by a clear argument that if the units represented in positive and negative numbers, are linear, they must be measured off in opposite directions from the same starting point. There is no poetry here, but an important principle fairly established from the definition.

Professor Elias Loomis, in his series of mathematical works, found no need to depart from the straight line of pure historical truth. Why can we not now be permitted to use these excellent works, so clear and satisfactory in all respects, left us by Professor Loomis? Let the great publishing houses answer that question.

Sometimes in the discussion of negative exponents, an author makes a new definition of an exponent, for example. "A negative exponent signifies the reciprocal of what the quantity would be if the exponent were positive." Now this definition is true, but seems to the student to be something new. The whole theory of exponents should be deduced from the original definition historically. When one definition of an exponent has been made arbitrarily, there is no place for another. Neither should anything be assumed, but the student should be made to see that every principle is fairly derived from the original definition.

The history of a nation or of a man is not complete when we have simply stated the facts, but the connection and dependence should be carefully brought out. So also in discussing a mathematical topic if we make a right beginning and proceed in the proper order, we shall learn the dependence of all the parts in their proper succession, and shall find out the real harmony and consistency of the whole.

THE NEXT STEP IN PEDAGOGIC STUDY.

THE necessity for a new movement in the study of pedagogy seems obvious for the following reasons: —

1. There exist already various anthropological sciences which seek alliance with pedagogy for their own sake, and which stand ready to give back to it a full equivalent for all that it can give to them. Pedagogy needs to acquire a seat in the anthropological

exchange. Students of these kindred sciences are ready to ask us questions, and are ready to give us data, some of which will prove to be readily translatable into school practice, while others will require from us diligent and skilful elaboration. At present, teachers surmise and guess, trust to intuition, work with eyes closed, often go wrong, feeling all the time that the elements of certainty may be hovering in the air, just eluding their grasp. This vague belief in a possible better, which may yet become actual, is wide-spread among school men and women. If we have possible co-workers, why are these not found out and made actual co-workers? Can we also measure and observe and record measurements and observations? At present we do not know how. We do not know what to look for. The function of teachers is the basic one of getting the simple facts of human growth and development. To develop these data and correlate them and formulate them into statements of law is a further work that will require the labor of specialists, such as we are not and can never be. One great end to be attained by a society for the scientific study of pedagogy is to bring into relations of amicable coöperation the teachers, who come into closest contact with humanity, and the specialists in anthropology, in psychology, in mental disease, in general medicine, in hygiene, whose work denies them certain opportunities which we have, and also gives them opportunities which are not open to us.

2. Education thus far in this country has grown by addition, by extension, rather than by deepening of insights and by securing more solidly the foundations. Earnest men and women conceive now and then a new subject, which they proceed to agitate for, to get it added to a full programme. All sorts of arguments are pressed upon the notice of the community, and public sentiment is roused by the familiar devices. The fundamental idea of our great teachers' gatherings is to interest the people of our country in our schools, — a most worthy purpose, but one that gives no hope of future good adjustments. Immense sums of money are yearly given for further expansion of our education, usually resulting in simple enlargement, increasing the unwieldiness of a mass for which some one must ultimately do a deal of profound thinking with the advantage of a knowledge of all that modern civilization has achieved in educational planning. It is high time that a corrective of the expansion-mania should be found in organization of all the shreds and scattered bits of zeal there are in the community for what may be

called educational intension. By this is meant careful elaboration of all collectible evidence that can be thought of, to the end of making it possible to discuss educational questions absolutely without the giving of views, without the pleading in advocacy of this or that special movement, without denouncing, without one-sided heat of any kind, without bringing great issues to the test of mass meeting votes, without attempting to settle things by the weight of official position and the influence of imposing names. Whether there is a science of pedagogy or not, there is surely a scientific way of treating pedagogical questions. It is possible to recognize the fact that evidence is not yet adduced in sufficient quantity, if such is the case, and patiently to wait for more, and to try to get more: it is possible, when evidence is offered, to try to determine the canons of its value and pertinence, and then to compare and sift it with the same coolness that a botanist or a biologist would show in sifting and comparing his evidence. It is pitiful to be at the mercy of the agitators, the faddists. But he who stands out against the agitators and at the same time stands out against a scientific treatment of education is simply an obstructionist.

3. Suppose, e. g., any teacher is brought face to face with a grave question. But the other day the teachers of Boston found themselves in this plight. These teachers were all asked their opinion on the question of co-education, with the view of changing ancient practice in this city. The collected answers are said to have been like those of the high commission that passed on the question of the election of Mr. Hayes and Mr. Tilden, where the democrats all voted one way and the republicans the other. There existed no accessible data to which any person still in doubt on the matter could have recourse to guide him to a conclusion; yet the question of the separation or the combination of the sexes in school would surely seem to be one that could be decided on objective, rather than on subjective, considerations. Both co-education and separate education have long been practised in this and other countries. Is it possible that there are *no* results at all? It is difficult to say now how to go to work to tabulate results of observations on this question; it is difficult to say what to observe. Yet this very difficulty at the outset is but a proof of the position that hitherto science has not dealt much with the matter. The sex question remains a popular one, like party politics. Yet the tables which the anthropometrists have even now given the world suggest the possibility of collecting

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THE DIVISION OF HIGH SCHOOLS.

X. Y. Z.

It is constantly happening in the growing cities of our country that the public high school outgrows its building and, in fact, becomes too large for good government and thorough supervision even could it be housed commodiously under one broad roof. Thus arises the problem of division and reorganization. Not many cities approaching their hundredth thousand of population but have had to face this question.

The most obvious solution of the problem is simply to duplicate the old school in some other quarter of the city. But if the original school still remains central to the mass of population, the new one must be set up in some suburban region, which in this way seems to the other suburbs unduly favored. Only when the old school is, by a one-sided extension of the city, itself conspicuously left eccentrically situated, will there be general acquiescence in the duplication of the existing school in another quarter. Moreover, two schools of identical organization and grading will tend to become rivals. All the costly purchases required by an ambitious school will have to be made twice. The happy thoughts of one principal cannot be carried into effect till the mind of the other principal has been brought to entertain the same views. Each school will hamper the other; each will be jealous of the other. A true inner development becomes impossible because each school has an eye on the other as well as on its own concerns. Again, the necessity of dividing a large school is an opportunity for differentiation. The secondary education is a complex whole, and each decade evolves for it new functions which have to be performed by means of corresponding new organs. The old high school has its departments, its recent outgrowths answering to the latest agitations in the community. Its various lines of work are heterogeneous. Division should mean also classification. Mere duplication seems a weak makeshift in view of the opportuuity for a separation of functions according to some principle.

What this principle shall be is the question.

First, shall the division be a horizontal one, cutting off the lower grades for the colony, and leaving the upper half of all the departments for the mother school? This certainly cuts the school in two, and the new creations are related organically, and not as rivals. This way of solving the problem has this advantage, that it renders possible a difference of discipline according to the maturity of minds. The younger children can be dealt with more as children, while the older ones can be treated with a judicious measure of freedom. But division by grades is still an omission of the grand opportunity for division by essential characteristics. Pushed still further than simple halving, or cutting in *two*, it implies for large cities one-grade schools, little units, whose only unity is the unity of the pupils' age, and where still exists all the complexity of function that the former single school possessed. Surely the horizontal section is not the wise one; splitting off of layers, or grades, is possible only so many times as there are grades to split. Then the problem recurs, how to reorganize the high school.

A method of reorganization that is hardly thinkable as passing by the vote of any American school board is that by school standing or scholarship. Let one school be a school of rapid movement, according to its superior ability, and the other be a school of slower progress, according to its limitations. In short, let the good scholars have their chance by themselves, and the less gifted their opportunity in conditions suited to their necessities. The very mention of such an arrangement is almost idiotic in its foolhardiness. Who shall draw the dreadful line of demarcation? According to a purely scientific pedagogy, the idea is by no means too absurd for discussion. It could be debated in Prussia; but it is tabooed in this democratic country.

Where lies the line of easy and natural cleavage? Shall the division be between the sexes? This also is apparently in this country an unpopular solution of the difficulty. Moreover, it is in its nature only a temporary solution. As there are only three or four grades to split, so there are only two sexes to separate. Make for the separate sexes two schools of five hundred pupils each, and what will you do when each of these schools comes to have near a thousand?

Obviously the division by sex will have to be defended on its own grounds, and will not serve as an ultimate and sufficient principle for providing against overcrowding in the secondary education. Division by sex is, however, a natural division. It is, in fact, the most natural, the most obvious, the most ready-made of all conceivable divisions; the most ancient, the least exposed to carping, the best grounded in the clear and patent facts of human life. Boys and girls differ in their intellectual processes, in their tastes, their amusements, their ambitions, in all the elements with which education is most fundamentally concerned. To separate the sexes is to make a distinction with a most palpable and manifest difference. Grading by achievement is an artificial and arbitrary principle of division. The grades of one school never correspond with those of the same name in another school. To measure and gauge scholarship is a fatuous pretension of pedagogic marking. The extremes are far enough apart; but from extreme to extreme is a gentle slope, with no natural chasm or other visible or surmisable dividing line. When promotions are to be made, a committee passes a vote as to the percentage figure that shall demarcate the promoted from the stay-behinds. This is surely not a natural cleavage.

Division by sex is the most clearly according to nature of all imaginable divisions. It asserts itself wherever the conditions favor the establishment of a secondary school with perfect freedom from external pressure. The private schools that are coming into being in response to a demand that makes itself heard in every larger urban community are almost sure to be schools for single sexes. The anciently founded academies in this country were established when pupils were few and money was scarce, and it was necessary to unite the sexes to fill the schools. But the well endowed and fashionable schools of today are uniformly uni-sexual. The public schools have to listen to a peculiar kind of popular agitation, one of whose cries is that each sex needs association with the other all the time, in the class-room as well as in society at large: as nature places brothers and sisters in the same family, so the committee should place boys and girls in the same school. The cogency of this argument is of a most peculiar kind. It is a cogency that public schools cannot resist and private schools cannot help resisting. Paying no heed to the most pregnant apothegms, but following simply the wishes of patrons, private schools do, all but invariably, form themselves as schools for separate sexes. It would seem to be a fair inference from this anomaly that schools that are constituted in accordance with the desires of those who are the most directly interested, namely, the parents, tend to become schools for single sexes; while schools formed in obedience to a general, impersonal, popular clamor tend to become mixed schools. Many a citizen favors mixed schools for the public, but separate schools for his own sons and daughters. Such a citizen finds it no hardship for his son to be sequestered for brief periods from the society of girls, and no loss for his daughters to be kept apart some portion of each school day from the company of boys.

Division by sex does not seem likely as yet to prevail in our public secondary schools. The division that does prevail, at least in New England, is one that has no element of naturalness or wisdom. This is the division into classical and non-classical, or, as they are usually called, following ancient Boston nomenclature, Latin and English High schools. Here at last is a complete example of a distinction without a difference. Difference indeed there is in externals, in courses of study, in names; above all, there is difference in pretension, in social grading, and especially in old associations. But essential difference there is not.

It was once true that the Latin school alone fitted for college. This was its differentia, its peculiar note and badge. This is true no longer. The ancient languages, the modern languages, the natural sciences, have all been levelled, and all equally fit for college. The *raison d'être* of special fitting schools no longer exists. The Latin school, as the sole school having relation to the higher education, has become a reminiscence. The Latin school today must teach physics and chemistry, French and German, with all the thoroughness possible to any school. The English-High school must teach at least a modicum of Latin with all the vigor possible to the school whose name is Latin. Between the two schools there has been more and more *rapprochement* until now they are in the same fold. The English school always had Latin, and now the

Latin school has taken the modern languages and the natural sciences. The English school henceforth must studiously observe the requirements of the college catalogue; and the Latin school must have its chemical and physical laboratories and make a serious business of its French and German verbs.

College preparation has ceased to be a special thing. Any good, thorough study, not immediately gain-giving, fits for college. To fit for Harvard College to-day demands the united forces of Latin schools and English schools. While the high school in any city is still one and undivided, and the problem of division is still unsolved, the division into Latin and English schools cannot possibly suggest itself as called for by existing conditions: it suggests itself merely as imitation of Boston; and the Boston practice is an inheritance from a venerable past now all but obsolete.

The youth destined for college once had to be segregated from his fellows at ten or twelve. The youth who graduates to-day from a good English high school may go to college if he please, having deferred his decision till his eighteenth year. The gain for the higher education has been enormous. Once the entire body of students in a college was homogeneous in respect of its studies. Now hardly will any two students be found pursuing courses quite identical. A diversity as thorough and pervasive as that which characterizes human minds at large now characterizes the work of our youth in college. Classical training is no longer essential either to the gentleman or to the scholar. A young man may devote himself, with utter forgetfulness of selfish considerations, to science, to modern languages, to history, to political economy, to art, as well as to ancient philology; and devotion to any science or to any art, to any philology or to any literature, is equally good; for it is devotion to things of the spirit, to things intellectual, that is coming more and more confessedly, to be the note of the upper education; and any devotion, any zealous self-abandonment to study, meets the conditions, whatever course of subjects be selected.

Formerly the Latin school fitted for college, and the English school fitted for business. Now both schools equally fit for college, and both equally fit for business. The ancient ground of distinction has vanished. The training that fits well for business, fits also for college. A boy may elect to fit for college with maxima of ancient languages and minima of modern ones and of science, or the reverse. But he cannot fit for college without at least a minimum of Latin and at least a minimum of modern languages and of science. It is absolutely necessary for the school that aims to avail itself of all the Harvard options to be a combined Latin and English school. The perfect fitting school of to-day must be a welding and solidifying of the two schools hitherto in Boston several and distinct. In this direction modern progress is moving.

Cities whose high schools are as yet single, with several internal departments, if they observe the tendencies of the times, will perceive that new interlacings and dovetailings are establishing themselves between the modern and the science work on the one hand, and the ancient language work on the other. A youth may elect full Latin and full German and full Physics. Then he belongs to two schools, or to two departments. The possible crossings and intersections of courses are innumerable. If the commissures and affiliations between two departments are multiplying, the old significance of these departmental divisions is fading away; and, to take warning from the signs of the times, this principle of division should be allowed to fall into desuetude, instead of being forced into prominence against its own innate preference to die out and cease to exist.

Such courses of preparatory study as may possibly lead to college should be concentrated in a single school having its own organization. It will not be necessary to require of every pupil on his admission to such a school a profession of intention to enter college. For this course of study, or, rather, any course wisely selected from the whole range of such a school, will be a good general education. It is the custom to ask of boys entering certain Latin schools a declaration that they purpose to enter college; so clearly is it felt that the course of study is one-sided, regarded as a finality. But the preparation for Harvard to-day, on any of its lines, is a good education in itself. The youth may postpone his decision to apply for the college examination until the day of his graduation from the preparatory school. This consummation is what Harvard has in late years evidently been striving to realize, and it is the duty of city boards and the heads of high schools to coöperate with the college by striving to give to so noble a purpose the fullest success and the widest field of operation.

It is a much wiser plan to make two high schools by segregating the sexes than it is to try to run a line through ancient and modern courses with their infinite coalescences and symphyses. In the one case the cleavage is natural and easy, with endless social, pedagogic and moral justifications; in the other it is as false and forced as would be an attempt to vivify a fossil.

Further subdivision of the high school in a populous community had best be effected by setting off in special schools such courses as are called for by the recently developed popular demand for mercantile and industrial education. Here again is a clear opportunity for classification according to essential differences of purpose. In all our large cities exists among the boys and girls about leaving the grammar schools a desire for such training in the various crafts as will fit them for remunerative employment. Every evening high school that is opened to the public shows what a throng of young persons feel the spur to study in certain special lines. Access to industrial high schools should be made easy: it need not require full graduation from the grammar schools. The children of families of the smallest means, who must earn their living very soon, have their right to consideration in the secondary education as well as the children of the well to do. More children from poor families would attend a high school if they saw awaiting them a high school that it would be of any use to them to attend. The school that would be useful to those who must soon become wage-earners would be a school so unlike the school that has been described above as fitting equally for college or for business that it would need to be a school by itself, with its own government.

Such an industrial high school in a large city could be classified and subdivided to any desirable extent. As soon as such a school outgrows its building, a colony can be sent out at once by separating the commercial and the mechanical sides; or the boys and the girls can be separated by a reasonable differentiation according to differences of future employment. It is altogether wrong to require intending young book-keepers or telegraphers or short-hand writers to pursue long and formal courses having no relation to their chosen work. The formalist in education is usually an obstructionist. No canon of studies lasts beyond the first serious newspaper agitation showing up old red-tape abuses. Public education is for all, and its institutions should be kept plastic, so that they may easily be moulded into new shapes, as the evident good of all requires.

NOTES ON TECHNICAL EDUCATION.

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IV.

TRANSFORMATION OF MIXED INTO PURELY TECHNICAL SCHOOLS.

The vagueness of ideas prevalent even among the promoters of technical education, and the uncertainty of their aims and purposes, their failure to apprehend the distinctive characteristics and differences of manual training, trade, and engineering or other form of higher grade of technical institution, and their consequent, often ludicrous, endeavors to secure in one the objects of all, and even sometimes, a good, general education at the same time, have led to so many and such serious failures, that it is very important that these distinctions and these various purposes should be exactly defined. The following statement seems to the writer to present the matter clearly.

A " manual training school " is one in which, in addition to the usual educational aims of the lower schools, it is sought to teach the boy or the girl the use of the tools of the more familiar trades; not at all for the purpose of giving the child an apprenticeship or to make him a skilful worker at a stated trade, but simply for the purpose of cultivating his manual powers in such manner as to give thorough command of his hands and brain, in perfect coördination. The exercises are *gymnastic* in a sense common at once to much of his brain-work and to his athletic sports and exercises. The purpose is not the production of useful and valuable carpentry, joinery, tools, or machinery, but the production of a better and more perfect boy or girl, of a human being of higher type and greater potentialities.

A "trade-school" is one in which the youth, now educated, in the usual sense, to as high a point as his own time and his parents' means permit, begins to learn the special operations and the use of the special tools characteristic of the vocation chosen by him as his life's work, that by which he is to gain a livlihood and earn competence, perhaps wealth and even distinction. Every such trade is based upon certain facts, data, principles, capable of being concisely formulated, scientifically grouped, exactly taught and applied. In other words: every trade has its science, its methods, its system of exact operation for best and most fruitful result in the production of the construction to which it is addressed, by the application of skilled labor in definite and prescribed ways. The trade-school teaches these fundamental principles, which are the science of the art, exhibits their use and highest applications, and indicates, in the light of the present, what is the state of the art as practised in the most perfect manner by its greatest masters; while, at the same time, giving such a basis of defined principles that the intelligent student can at least see in what direction to look for further improvement, even if he cannot at the moment himself effect such advance. He is prepared to do his own work to best advantage, keeping close to the known highest limit of existing practice.

The "engineering school," finally, is one in which the highest developments of applied science are taught as a basis of what has come to be considered a learned profession: that of the constructor; using that word in its highest sense. The engineer designs structures and machinery of all kinds, railroads, canals, bridges, highways, locomotives, steamships, mills, factories, engines, machine-tools, apparatus of electric light and power distribution, mining machinery. All the powers and energies of nature are by him reduced to service and compelled, through his constructions, to do duty for mankind. To do his work efficiently, he must be familiar with the principles of the higher mathematics, the laws and facts of the chemical and physical sciences, the most abstruse methods of applied mechanics. This means that he must be given an education, after and beyond that general and even liberal education which it is the ambition of every wise and earnest man to secure, which later training comprehends a special but advanced curriculum, demanding, usually, closer application, more prolonged and more difficult study than is commonly required for success in the learned professions, formerly distinctively so called, and which gives his full claim to be enrolled in that honorable list. The technical schools of this class demand of their students, when of the highest grade, severe and constant labor, from nine to twelve hours per day, throughout a course of four years' duration. It is not remarkable that often but one-third, or one-fifth, complete such a course, and that the instructors in such schools find it difficult to insure such preparation and mental discipline of the candidate for matriculation as make it safe for him to enter upon such a course. Few preparatory schools can give such instruction in the mathematical and physical sciences as is considered desirable by the members of the profession into which the aspirant proposes entering; still fewer supply that moral and intellectual discipline which is still more essential to final and complete success. To complete such a course by the time of his arrival at his majority, the student must enter at seventeen; but no one young man in ten, at that age, has had such efficient and fruitful training as fits him for his work in the professional school.

The engineering school is not a trade-school. The engineer is compelled to prepare his designs, and plan his public or other great works with constant reference to the fact that they are to be constructed, finally, by the trades. He must therefore be so familiar with these trades subsidiary to engineering that no impracticable or needlessly expensive constructions shall appear in his scheme. The school of engineering, therefore, must not only give the novice a training in mathematics, applied mechanics, chemistry, metallurgy, physics, and the various phases of energy-transformation in all their forms of employment in the prime motors; but it should also give him at least some idea of the nature and methods of work in the several trades contributing to the success of his work. In fact, as no man can well direct others in the prosecution of work unless he is himself familiar with it in detail, and capable of showing the incompetent how to do good work, it has become tolerably well-settled that the student in the engineering school should be given enough of carefully planned and systematic instruction in the use of the tools of the trades to enable him to distinguish good from bad work, to direct the execution of his designs, and to show, if necessary, just how he desires his work done and what degree of excellence will answer his purpose.* The schools of the trades are thus accessory to the school of engineering, but are not their distinctive feature.

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* The engineer often finds that financial considerations forbid the expenditure of money for the best work or finish, and he must often decide just how good a quality of work is, on the whole, best for his purpose, under specified conditions. It may here also be remarked that the writer has often known of cases in which young men, not long out of the engineering school, directing work, have actually taken the tools from the hands of old workmen and shown them just how to do a certain required piece of work to meet the demands of the specification. The systematic training in the use of tools which is now sometimes obtainable in the best engineering schools often gives most remarkable results in the rapid and exact production of work where the student has the natural talent essential to the success of the engineer—and none other should attempt such work.

The trade-school, proper, gives instruction in a single trade; the engineering school gives more condensed instruction in each of several trades; all of which conduce to the performance of that special line of engineering work. Thus, the mechanical engineering school gives instruction, not in carpentry, or joinery, but in pattern-making; not in general blacksmithing so much as in tool-making and tool-dressing, and in the work of the foundry and the machine-shop so far as it contributes to the production of the special kinds of machinery studied by the classes of mechanical engineers.

The gradual recognition of these facts and of the real purpose of each of the several classes of technical schools which have come into existence in response to the demand that has been so steadily increasing in extent and intensity since the times of Lord Worcester, of Milton, of Vaucanson and of Froebel, has thus led to the evolution of schools precisely adapted, each to its special work, and has led to the gradual modification of the mixed schools and the formation, consequently, of the purely technical schools of each of these several grades. In the case of the engineering schools, this final evolution of the purely professional school is even yet in progress. The trade-schools, especially as so extensively organized by the governments and municipalities of Europe, were of necessity long since thus differentiated; but the manual training and engineering schools have been slower in taking form. In reference to this matter, the writer has recently remarked, in the latest of the reports from which so much of the present series of articles has been extracted:—*

"During the five years of operation of the college just closing, the courses of instruction, originally largely non-professional, have been gradually improved and modified, until the Director is able now for the first time to report that the purpose aimed at by him, under the general instructions of the Trustees, has been substantially accomplished and the Sibley College courses are now purely professional, and, so far as four years of continuous aad somewhat heavy work can bring it about, are effective in the preparation of students for their professional novitiate. That further improvement may still be effected cannot be doubted; but it will be by the improvement of courses of instruction in purely professional work, not by the conversion of a nondescript school into a professional one. The school, as now constituted, is as purely professional as is the School of Law or a School of Medicine. It has, so far as this aspect of the institution goes, become the ideal in form, and, in this respect also, is probably somewhat in advance of any other institution of its kind in this country.

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* Reports to the Board of Trustees of Cornell University, under Standing Instructions to the Director of Sibley College.

"Aside from the improved value of the college as a means of technical and professional education and training, this attainment of the end, so long held in view by the trustees and the director, has this most important result — in the opinion of the profession, if the director is competent to judge, — that it is now possible to clearly show to intending aspirants for its degrees, that, since it is a purely professional school, there cannot be expected of it any portion of that general and literary training which constitutes general education, and that this should be sought, and as in the case of the study of law, before entering the professional school.

"It has often happened that parents, as well as young men proposing to study for a profession, have made the serious and almost fatal mistake of assuming the possibility of securing, at the same time, a good general education, in English and scientific branches, at least, and a professional training, and that it is practicable to secure either an education in the professional school or a professional training in a semi-educational institution. This, experience proves, in engineering as in law, is entirely impracticable. The small amount of general education given in any of the professional schools has little value for its purpose while simply crippling to a more serious extent the work for which the school is especially fitted and established. The education, — and as complete and as broad an education as the means of the student will permit, — should be first secured and made a sound and ample foundation for his life-work; *then* the young man should take up his professional work, well prepared to appreciate it, mature, intelligent, earnest, and discriminating. The professional man, whether physician, engineer, lawyer, or divine, should give his time and thought, in early years, to the securing of the best possible education in the best possible way *first*, and, that done and well done, should next take up a professional course. The whole strength and all attention should be given, first to one, then to the other, to secure highest results in either field.

"The general arrangement of the course is now also vastly more satisfactory than formerly, and the full four years period is given to systematic and progressive instruction. The completeness of the undergraduate course is now such that the student is able to give a very considerable amount of time, in the last two years, to work in the laboratories and in not only tentative experimental work, but also in real work of scientific research. This latter portion of his course is characteristic of graduate schools, and its extent measures the gain which we have made over the average technical school, in which either no such work is done, or it is attempted before the preparatory course is sufficiently advanced.

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"Graduate work in Sibley College is progressing steadily and most satisfactorily. For the first time in the history of the college, there have been, this last year, two Fellowships assigned to students, candidates for advanced degrees in Mechanical Engineering, one in the regular line of general work, the other in the special branch, Electricaal Engineering; and both of these cases have illustrated the advantages to accrue to the college, and to the university as well, by the assignment of a liberal allowance for Fellowships in this department. Not only these gentlemen, however, but the several candidates for the higher degree, have been doing admirable work in research, and in the solving of most important problems, both from the scientific and the professional point of view. Some of this work will be published, as usual, and it is anticipated that it will add to the reputation of the university as well as to that of the investigators and their professors. It is eminently desirable that a liberal number of Fellowships should be assigned definitely to this branch, and it is thought likely to prove as helpful here as it undoubtedly will prove to be in the new School of Philosophy, now so splendidly started.

"The number of students taking graduate work, and the number coming from other colleges to secure the advantages in which Cornell is beginning to be considered as exceptionally rich, is now constantly and almost embarrassingly increasing. *It is also becoming more and more usual for young men, whose time and means permit, to take, first, one of the general courses, and thus to secure a liberal education, before entering into the professional school. This last plan is most satisfactory and every possible means is taken to encourage the custom. Professional training is not the equivalent of a liberal education.*"

The emphasis placed upon the last lines of the above is not too great, considering the fact that even the most able and thoughtful of our educators, and, in fact, many engineers as well, have failed to recognize the essential truths thus expressed. The most distinguished scholars and teachers, and the ablest men in the engineering profession, in law, in theology, and in medicine, are continually making the mistake of sending their sons to the professional schools before they have given them an education, in the expectation that, in some manner, a way may be found of giving, in four short years, not only a college education but, also and therewith, the special learning of the professional school. The truth of the matter is that, if properly organized and conducted, the better the school of engineering, the less its facilities for general education and discipline; though, unquestionably, the greater severity of its courses, the more unrelenting compulsion of "attention to business," and the unsparing elimination of the drones and incompetents, make the school of engineering, as illustrated by our best examples, both here and in Europe, the most thoroughly disciplinary within its restricted limits, of all the institutions of learning of modern times.

The evolution of the purely professional, from the old and inefficient mixed literary and technical school has permitted another and, in some sense, an even more important advance: — the formation of graduate schools and the prosecution of work of research as an essential feature of their operations. A reference to this matter appears in the above extract from the annual report of the writer on the operations of the institution under his charge. All the great schools of engineering and advanced technical schools are taking up this line of advance, and, in some cases, have made considerable progress. This progress is usually effected largely through the operations of the engineering laboratories, which, here and abroad, have of late years been at once a great financial load and a more than proportional advantage; giving a higher and more productive and more stimulating kind of instruction than is offered even in the highly stimulating undergraduate schools of this class; while they, at the same time, contribute constantly and extensively of the noblest additions to human knowledge in the innumerable fields of applied science.

These laboratories of the great technical schools are to-day doing perhaps more, in proportion to number and facilities, than any other class of institution devoted to investigations of the scientific sort.*

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* An interesting and very complete account of the origin and work of existing European and American schools of this kind may be found in recent issues of "La Révue Générale des Sciences," by Prof. V. Dwelshauvers-Dery of the Ecole des Mines, Liège.

They are very costly in equipment, and in that sense a serious tax upon the higher institutions of this class; but this often is in some degree made up to its treasury by higher tuition fees: a method somewhat opposed to American ideas of educational policy, especially in the administration of the "Land-Grant Colleges" of the United States, which were endowed by Congress for the benefit of "the industrial classes," but it may be justified, often, by necessity. Few college or university endowments will be at the strain of full provision for modern higher technical education.

In a few cases, among them the Cornell University, the state college of New York, graduate technical schools have been authorized, and the establishment of this class of engineering colleges and schools marks an epoch in the history of education for the "industrial" classes. The institution of truly professional engineering schools to which we have just arrived, is in itself sufficiently interesting as indicative of the progress made in the last generation in this direction; but the graduate school in which the practitioner, as well as the recent graduate may pursue the special studies of his art in its highest departments, can make investigations of new and great problems, and can prosecute researches bearing upon those grand advances which he can see looming up as the probably coming wonders of the new century, represents the very apex of the great educational pyramid which the nation is now completing for the advantage of its greatest and most deserving classes of citizens.

And many are required to meet these demands. Schools of marine engineering and naval architecture, such as now find illustration at the university of the state; colleges of railway and of steam engineering; of applied sciences in textile manufactures; of mining engineering; of chemical industries: such schools and colleges devoted to the highest work of their respective departments, and to the solution of all the still uninvestigated problems of marine, terrestrial, and aerial transportation, of utilization of the still mysterious forces and energies of nature, of the application of all the sciences and of all the arts to useful purposes, must inevitably have a large influence for good in the development of all our natural resources, in the promotion of the welfare of the people, and in the advancement of the highest phases of civilization and human progress.

IN THE CLASSIC HALLS OF LOUVAIN.

EUGENE DAVIS.

LOUVAIN is a typical Flemish town of the medieval type. It is a drowsy, tranquil, phlegmatic centre of population, with narrow streets and quiet squares over which the past seems flinging its grey and mystic shadows, and where one would expect to meet at any moment in the flesh those belted knights whose statues occupy many a niche in the walls of the Hôtel de Ville, and whose memories are cherished in lay and legend. After an eventful life of half a thousand years the place is reposing on its laurels. Like Ghent, and Bruges, and Mechlin, it is taking a well-merited rest now that the fitful fevers of so many generations have at last subsided.

Louvain is situated in North Brabant, Belgium, on the banks of the River Dyle, some sixteen miles east of Brussels. It was for a long time the residence of those valiant Dukes of Brabant who were once the leading archers and knights of Europe. Throughout the middle ages the town was, perhaps, the most flourishing centre of woolen manufactures in the world. Its prosperity, however, came to an untimely end, owing to the turbulence of the weavers whose conduct became so intolerable that they had to be expelled from its precincts. Their expulsion proved to be a blow to the woolen industries, from which they never recovered. Louvain has now only one-tenth of its former population, and the only industry it can boast of at present is that of a brewery which turns out 200,000 casks of white beer annually.

The city on the banks of the Dyle, however, has not won its world-wide reputation as a commercial and industrial centre. Its fame and name have become universal from the fact that it was for centuries the seat of one of the greatest of European universities. It had in the far past an international seminary to which flocked hundreds of young men from Germany and Ireland, from France, Spain, and even from Italy and Greece.

The history of the University of Louvain is a somewhat eventful one. It was founded in 1425 by virtue of a bull of Pope Martin V., authorizing the chapter of the Cathedral of St. Peter's to form classes for the education of the young. Its growth was at first somewhat slow and stunted. The shadow of the Sorbonne seemed to have a blighting effect on its progress, for the Sorbonne at that time was the university of universities, hallowed in the eyes of scholars by traditions of light and learning. Paris had had its Duns Scotus, and scores of other literati to whom it could point with a pardonable pride; but Louvain in its swaddling clothes could boast of nobody who as yet reflected credit on its intellectuality. Time, however, makes all things even. After a career of half a century, its students increased from twenty to one thousand; some of the most talented professors of Europe were induced to fill its chairs; and youth were educated within its walls, who afterwards distinguished themselves in the arena of theology and kindred subjects.

The progress of Louvain thenceforward was by leaps and bounds. Philosophers spoke of its brilliant curriculum, and doctors of the church felt prouder of a Louvain degree than they did of any other. Its reputation began to extend throughout the length and breadth of Europe, till eventually the muster roll of its students reached the colossal figures of 6,000, belonging to nearly every European nationality. The authorities of the Sorbonne grew alarmed at the extraordinary development of its neighbor. Hundreds of young men were abandoning the Latin quarter of Paris to pay their respects at the shrine of learning on the banks of the Dyle. The Sorbonne was living on the reputation of that erratic genius, Abelard, who, years before, created such a sensation in scholastic circles in the French capital by his revolutionary religious ideas. Though many of the sages of the Sorbonne had disavowed his theories, they were none the less inclined to look upon him as one of the most brilliant luminaries of their university.

If, however, the Sorbonne had its Abelard — who, by the bye, was personally a curious compound of doctrinal theology and gushing sentiment — Louvain was able to point to its Jansens, one of the greatest scholars of the middle ages, who, after receiving a thorough education, used it in after years, as Voltaire did his, against his former teachers and professors. Jansens's doctrines, published in book form, were condemned as heresies by a Papal bull, and the volume itself was put on the Roman Index, or in other words was interdicted as dangerous reading. Jansens strained every nerve to induce his alma mater to subscribe to his theories, but Louvain had no desire to bring down the thunderbolts of Rome on its head and refused to sanction his writings, although some of the students and one or two of the professors were more than suspected of being in hearty sympathy with the distinguished "heretic."

The curriculum of Louvain University for hundreds of years, like that of every other university of those days, was almost exclusively ecclesiastical. It included Theology, moral and dogmatic, Scriptures, Liturgy, Canon Law, Church History, and Tradition. Speculative philosophy was the basis of the intellectual training of the alumni. That was an epoch in which Plato's theories, leavened with the Christian spirit, prevailed in the domain of thought; when Bacon's inductive method was as yet unknown, and when experimental investigations into the laws of nature had not yet become the hobbies of master minds, and abstract ideas formed the chief subjects of discussion.

In the *Aula Maxima* of the university, annual and sometimes semiannual discussions took place, which lasted from seven to ten days. The leading theologians of Europe used to take part in the debates which were, of course, conducted in the medieval Latin — a language which is spoken with much fluency by most Roman Catholic clerics. The theses propounded at these meetings had an extraordinary attraction for the erudite of that day, though now they are very rarely discussed outside the precincts of academies and universities. The public, or at least the thinking portion thereof, would attend these sittings, and follow the arguments with as much interest as Americans of to-day follow the debates of Congress. The problems put forward for analysis at such gatherings were entity and essity, the latest prevalent heresy, the explanation of the latest dogma, the value of tradition as an authority in the history of the church, and a thousand and odd questions of an equally abstruse character.

After an invocation of the Holy Spirit, one of the professors or students would stand up and state his thesis; and marshalling his propositions in the best possible order, would deduce his conclusions therefrom. He was subsequently expected to answer all the objections raised to his theories by other literati present, and would find himself obliged to distinguish, and counter-distinguish, and subdistinguish, till he had exhausted each and every logical subtlety in self-defense. Should he emerge triumphantly from the ordeal, his reputation as a scholar was established, and his name became a household word in the academies of Europe. Here in these theological tournaments the doctors of Padua would cross intellectual swords with the doctors of the Sorbonne, and objections started by the men of Salerno would be answered by their confrères of Louvain. Thousands used to gather from all parts of Europe to attend these argumentative battles.

For nearly four hundred years Louvain thus flourished as the great centre of ecclesiastical thought. It was, in fact, a kind of literary Arcadia, the learned calm of which, however, used to be broken in upon by periodical explosions. Conflicts would take place occasionally between the students and the turbulent weavers of the city. The workingmen looked on the pupils of the university as so many idle dawdlers or dreamers, who contributed nothing to the material welfare of the town; while the pupils regarded the toilers as rough, uncouth, brainless boors, whose aspirations never rose higher than their grovelling appetites. Sticks were often brandished, and skulls were sometimes fractured in these combats. On other occasions foreign foes would cross the Brabant borders, when the students to a man would abandon their books, and girding on their swords would fight bravely and gallantly in defence of the old university town.

A day, however, was dawning when the alumni of the university could no longer save their citadel from capture. The Reformation started by Luther did not affect the welfare of Louvain to any appreciable extent; but another and a more sweeping revolution was destined to sap its very foundations. The Encyclopedia was just then undermining Christian faith in the Latin states of Europe. The writers of that wonderful tome made no distinctions between Lutherans and Roman Catholics, Methodists and Calvinists; they made war on all. They denied the divinity of Christ and consequently refused to acknowledge any divine authority in any of the churches that took his name. Jews and Mohommedans were, in their eyes, as much mistaken in their religious ideas as were the Christians. The existence of God was maintained; but the right of any particular sect or church to claim God as peculiarly its own was laughed at as a shrieking absurdity. Voltaire, Rousseau, and Condorcet were the apostles of this new gospel, the teachings of which prepared France for the Revolution of 1789, which by a strange fatality led up to the bloody Reign of Terror of 1793.

After the butcheries in the French capital ceased with the decapitation of Robespierre, the French troops crossed the frontier of the Netherlands and entered in thousands the town of Louvain.

The students made a gallant struggle on that occasion, but they were only as one to twenty, and had to give up the fight. The city became then the property of the French Republic; and its university was suppressed by orders of the French commander-in-chief, ratified by the Paris Directory, and the building itself was turned into a hospital and barracks. All the professors were dismissed, and the students were dispersed all over Europe. From 1793 till 1814, Louvain was a garrison town. In 1815 on the definite downfall of Napoleon at Waterloo, when Louvain was restored to the King of the Netherlands, its inhabitants inaugurated an agitation for the recovery of the university, and in 1817 it was reopened amid scenes of enthusiastic joy and jubilation.

The university building of to-day, with the exception of sundry improvements, is practically the edifice which was founded by John the Fourth, Duke of Brabant, in 1426. In its interior the visitor can still see the historic corridors where professors and students passed their recreation hours, discussing knotty problems and dissecting scholastic subtleties, and the famous library containing many thousands of antique tomes, the central passage of which is lined on either side with pedestals crowned with busts of some of its more prominent alumni, whose high intellectual attainments did so much for the prestige and glory of this institution. At the zenith of its glory the university had no less than forty-five colleges attached to it. One of these colleges, that of St. Anthony, was a seminary for the instruction of Roman Catholic students from Ireland who aspired to the priesthood, and who were unable, owing to the circumstances of the time, to receive an ecclesiastical training in their native land. St. Anthony's college was founded by Prince Albert and his wife, Princess Isabella of Spain, in 1606, and was affiliated to the university by a special bull of Pope Adrian VIII. Here it was that the famous historian O'Clery conceived the idea of writing the "Annals of the Four Masters." This Irish institution was swept away during the French Revolution of 1793, and has never been restored. Irishmen who study for the priesthood in Louvain now-a-days, are located in the College du Saint Esprit, where young men belonging to French and Belgian nationalities are also trained for the ministry.

Of the twenty colleges still attached to the university, the North American college is worthy of special notice. Its president in 1877-'78 was a Dutch-American, who, I believe, has since been promoted to a post in the Roman Catholic hierarchy of the United

States. The college, which is a plain, unpretentious building, shelters under its roof some thirty-five or forty clerics, German and American, all of whom follow the ecclesiastical course of studies in the university, and in due course of time are ordained priests for the American missions. This American college has nurtured several American priests and bishops who combine a courtly continental grace of manners with a solid as well as brilliant intellectuality. Among its most talented alumni are the Right Rev. Archbishop Riordan of San Francisco, and the Rev. Father O'Sullivan of Cummings, Chicago. It only remains for me to add, referring to this establishment, that the Fourth of July and Washington's birth-day are always celebrated with pomp and éclat within its walls, and the Stars and Stripes are toasted with genuine patriotism by true sons of Columbia.

There are two classes of students in Louvain University, the clerical and the lay. The headquarters of the ecclesiastics are in the College du Saint Esprit, a building which is entered by a quadrangular court, and which usually gives shelter to one hundred and odd aspirants to the priesthood of the Roman Catholic church. These gentlemen, whose ages vary from eighteen to twenty-eight, look very dignified and reserved for their years. They do not associate habitually with their lay fellow students, whose tastes and dispositions are quite different from those of men who purpose consecrating themselves to the cause of religion. These priests of the future are attired in soutanes of rough, black serge extending to the ankle, and drawn tightly around the waist by a girdle or *ceinture*. Either a Gallican or a Roman collar encircles each neck, while shovel hats and buckled shoes are the orthodox covering for head and feet.

Life in the College du Saint Esprit is somewhat dull and monotonous. The first bell rings at 5 a. m. in summer, and 6 a. m. in winter, when one of the superintendents promenades the corridors, crying out, "*Benedicamus Domino*," the response to which, "*Deo gratias!*" comes pealing from the cells on either side. One half hour afterward all the students are assembled in the little chapel attached to the college where they spend some time in meditation. They then hear mass, and subsequently retire to their cells where they prepare their studies for class. At 8 or 8.30 a. m., they gather in the refectory and do justice to a meagre collation comprising bread and butter washed down with coffee or chocolate. This meal is followed by a half hour's recreation in the courtyard, after which they proceed to the central university building for lectures. At 12.30 p. m., the *dejeuner*, consisting of a soup, a plate of meat and of vegetables, is served up in the dining hall, followed by one hour of recreation. The rest of the day is spent in study and lectures. The dinner, which is much the same as the *dejeuner*, takes place at 8 o'clock, p. m., succeeded by half an hour's recreation, after which prayers are said in the chapel, and all retire to rest — the college gates being closed for the night at 9.30 p. m.

The life of a lay student in the university differs essentially, and in many points, from that of his ecclesiastical confrère. He is not compelled to rent a room in any of the colleges. He usually has chambers in private lodgings, and takes his meals at a restaurant. When I was a student of the university, a friend and myself had to pay, in all, only twenty-five francs a month for a furnished drawing room and two bed-rooms, while sixty francs per head a month was the cost for two succulent meals a day at a chop house close by. Food is comparatively cheap in Belgium, and, moreover, in every country in the old world the student is not expected to pay as much for his bed and board as the general public. His home is his castle. The only obligation imposed on him is that he must attend a given number of lectures throughout the academical year. If he fail to meet this obligation, he is disqualified from competing for a diploma at the annual examinations. If a lay student passes through his curriculum with éclat, he is expected to honor the occasion with a symposium attended by his intimate friends, who consume a few barrels of beer and a stone or two of tobacco at his expense. Coteries and circles of lay students meet at specified times in cafés where they enjoy what is called a *ponch* consisting of a glass or two of hot kirsch or Holland gin, in the fumes of which the readiest repartee flashes from lip to lip, and eloquence of a classic character is indulged in till the wee small hours of dawn. On other occasions the alumni file through the streets with flags and banners singing some of the national songs of Belgium.

One of the most remarkably gifted lay students of the university in my time was an Irishman named Marcus O'Sullivan. He had such a taste for universal knowledge that he used to attend all kinds of lectures, theological, legal, medical, and others. He had been for years a dreamer over his books in these classic halls. He had become so much acclimatized to the land of his adoption that he was more Belgian than the Belgians themselves, and spoke English with a decidedly foreign accent. One day, while we were attending the literature and language class in the university, the Professor and O'Sullivan had quite an interesting passage-at-arms. The professor was almost as accomplished a linguist as the late Cardinal Mezzofanti, and was very fond of testing the knowledge of his pupils in the various tongues. None on this occasion were found competent to discuss any subject with the learned man in more than three — the Latin, French, and Flemish — until it came to the turn of the Irishman, who, to the utter bewilderment of his colleagues, kept up a running fire with the professor, not merely in these languages, but also in Greek and Italian, Spanish and German; and eventually when Marcus put a poser to his antagonist in Irish, and the latter failed to reply, a cheer rang from the lips of the assembled students, and O'Sullivan was dubbed by universal acclaim "the Polyglot Magnificus of Louvain."

The chairs of lay studies in the university are filled by the most competent professors. Medicine, surgery, law, literature, and engineering form the various departments of secular knowledge in the university. It is no exaggeration to state that Louvain has been the alma mater of the most distinguished members of the various learned professions of Belgium.

It has, however, never recovered from the blow struck at it by the Revolution of 1793. Yet the illustrious name it bears and the classic traditions of its past have saved it so far from utter extinction. It now contains some six hundred alumni, and is the State Catholic University of Belgium, in distinction from that of Brussels, which, though supported from the national exchequer, is liberal and semi-atheistic in its doctrines. The famous theological debates of former days are kept up; but they are the merest shadows of their former selves, and are attended now almost exclusively by ecclesiastics. Yet in its decay and hoary old age Louvain has still a charm and fascination for the scholar. The exuberant literary life of its past cannot, it is true, be revived, but no revolution, no onward march of progress, can efface the glamour of that historical lustre which still rests and will always rest on the grim cornices of its cathedral, on the dusky niches of its Hôtel de Ville, and on the venerably antique walls of its time-honored university.

THE REGENTS' CONVOCATION OF 1891.

At the University Convocation, this summer, there was gathered an unusual number of men of national reputation. Besides the Presidents of Columbia, Union, Rochester, Vassar, City of New York, there were in attendance representatives of Cornell, Colgate, Elmira, Barnard, Clark, and Johns Hopkins. Dr. Clark of Canandaigua, who, for more than a quarter of a century has not missed a meeting of the Convocation, must find the atmosphere of these gatherings somewhat less soporific than in the old days. Our own experience goes back little more than half as far as his, but we disstinctly recall the solemn occasions of fifteen years ago. Dismal times they used to be, not because valuable papers were not read and wise words spoken, but because an unnatural gloom was kept constantly over the meeting by some subtle influence which to this day we have not analyzed. The teachers and the regents are alike to be congratulated on the improvement.

The discussion of Thursday morning, considered simply as a discussion, was as good as we ever listened to. To be sure, it settled nothing. No solution of the problem of coördination was offered, at least none that was endorsed by more than one or two of the speakers, but such a result was unavoidable. Problems of this sort require an element of time for their solution. They must lie in soak for a certain, or an uncertain, number of years before they get softened enough to be workable.

The discussion of the higher education of women called out a larger audience than the floor of the senate chamber could accommodate, the fairer sex being specially well represented. The speakers contented themselves with making claims and counter claims, and it would be safe to say that no one changed his mind regarding separate education or co-education because of anything that was said. Whatever side anyone had previously espoused was amply defended by its advocates in the discussion. Nothing can be happier than such a condition of affairs, for each listener and each speaker goes away satisfied that the side which he favors has the best of the argument. Of the various speakers whose voices were heard for the first time at a convocation, Mr. Hamilton W. Mabie and Miss Ella Weed are to be specially felicitated on their presentation of Barnard College. In modesty, brevity, and exquisite fitness, it would not be easy to improve either on what Miss Weed said, or on her manner of saying it.

Chancellor Curtis presided with a gracious dignity and courtesy that go far towards making one inclined to pardon his rare inefficiency as a time keeper. We think twenty-eight minutes was the longest speech that was permitted under the five minute limit. If the executive committee could borrow one of the Estelle program clocks, which can be counted on to strike every five minutes, possibly it might help matters. Certainly it must be to the last degree exasperating to the man who has been asked to speak for five minutes and has rigidly kept within that time, leaving unsaid much that he wanted to say, and compressing every thing into close limits, to have the next speaker ramble on undisturbed for fifteen or twenty minutes. A five minute rule is harsh enough in all reason, without having its rigor rendered still more trying by alternate enforcement and relaxation. It is not easy or pleasant to stop a speaker whom all respect and admire, especially when he is holding the attention of the audience, but business is business, and the rule should be either formally abandoned or rigidly enforced.

We give, in the present number of THE ACADEMY, the substance of the remarks of some of the speakers in the discussion on coördination, in order that our readers may judge for themselves something of the tone and spirit of the discussion.

Mr. White, Ex-president of Cornell, opened the subject. After alluding to the vast sums recently donated to university education, and commenting on the lavish appropriations bestowed by the state on the public schools, he spoke of the connecting link between these two institutions as so slender as to be almost a "missing link." He made use of the figure of a tree with wide-branching top and abundant roots but with a slender trunk which hardly seems sufficient to connect the two. One could not but feel that his figure hardly sustained his argument, for it cannot be denied that, in reality, the slender trunk furnishes all the connection between top and roots which the tree needs or can use. We do not claim that the secondary schools bring down or take up all the nourishment that is desirable for the lower or the higher schools, but we think that the speaker was wrong in assigning reasons, and that if his figure holds good, the trunk of the tree is doing its whole duty. Possibly he would suggest the banyan tree as a better model than the elm.

We admit very frankly that it may be just as hard for a secondary teacher to look at this question with unprejudiced eyes as it is for a university man to judge it with perfect fairness. We note with special pleasure the absence from Mr. White's remarks of the harsh and censorious tone which is so often heard when university men speak of secondary work, and we wish to say our little word on the other side just as courteously and with the same feeling of hearty respect and appreciation for the workers in higher education which he showed towards those in the secondary schools.

We quote briefly from his remarks: —

> Those of us who are connected with universities are often called upon to wonder, when young men come to us at eighteen or over, what in the world they have been doing all these years, for even though the entrance examination be an examination purely for a technical course, we find that too often the simple English branches in all these years have not received anything like the attention which a really well-ordered system of intermediate education demands. I would not for a moment cast any slur upon those engaged in intermediate education; no men are held by me in higher respect; but they labor under enormous difficulties. Their high schools, their academies, are generally carried on with small funds, funds doled out to them so that they are totally unable to command or to retain the sort of men they ought to have. There is no opportunity to hold the students in those small sections which are not generally required in university instruction, but which are so necessary in intermediate training.

"Those of us who are connected with secondary schools are often called upon to wonder" if the work of the higher institutions could be subjected to inspection and criticism by still higher competent authorities, as the work of the secondary schools is every year and constantly submitted to the criticism of the colleges and universities, whether the latter would stand the test better than the secondary schools now do. Every man is naturally a fairly favorable judge of his own work. If the secondary schools formed the upper limit of a system of education, we fear that their teachers would come to feel that the work which they accomplish approached very near the ideal. They are fortunately prevented by their circumstances from making any such mistake. If they had only their own passing and graduating standards and examinations by which to judge themselves, we are sure their complacency would grow as at the present it has little chance of growing so long as they are at all sensitive to the criticism from above, of which there is now no appreciable lack.

Mr. White's strictures upon the secondary schools contain no suggestion of enmity or blame. In fact he tempers them with excuses for shortcomings and speaks cordial words of praise. We do not question his purpose or resent his criticism, but secondary teachers are not without experience as to the quality of the higher work. Many of them have had the benefits of such work as is done in the universities, and retain a vivid remembrance of its strength and its weakness. All of them are in position to judge somewhat as to the attainments and teaching power of the men who undertake the instruction of pupils fresh from graduation from the secondary schools. Mr. White speaks of the funds of the secondary schools as "doled out to them so that they are totally unable to command or to retain the sort of men they ought to have." But if we mistake not, the average salary of the men in the best secondary schools in New York state is considerably larger than the average salary of the instructors to whom the best universities of that state confide the teaching of the year above the secondary schools. If a university can command and retain, at a salary of a thousand dollars, a teacher competent to instruct freshmen, why should not an academy or a high school paying a higher salary, be able to command a man competent to instruct sub-freshmen? As to experience, the secondary teacher is apt to have the advantage, and as to the size of the classes instructed, those in a high school or academy are surely much smaller. We frankly confess our inability to follow the reasoning laid down, or to reach the desired conclusion.

Mr. White says: —

> Now what I would suggest is that these colleges frankly accept the situation and become intermediate colleges in a system properly coördinated from the public schools to the universities. They would supply, and supply nobly the missing link.
>
> As to the universities I would go on with the progress by eliminating the two lower classes of the university. I would give those to the colleges. I would get rid of the enormous freshman and sophomore classes, who are really preparing for advanced instruction. I would give them to the colleges, and I would devote the universities to a higher general and professional instruction and to nothing else, that is to instruction and research. Now there is a special reason for this. To do it, however, involves one thing which will at first probably create opposition. I think that the colleges in order to do this should revise their requirements and begin

earlier than they do now, with a modicum of mathematics and with very little if any classics. I mean that they should begin at the beginning of classical instruction, or at any rate end with what the universities of this country require at the beginning of their schedules. Then I would have them continue their four years' course as now, and the great thing which would be gained is that the training would be vastly better than it can be now, because it would be given in smaller classes to smaller bodies of men.

The age of admission to our universities has been advanced until it is now eighteen and a half to almost nineteen years in some cases. It is well over eighteen at Cornell. There is no reason why, with our public schools what they should be, young men should not enter intermediate colleges as men used to do at twelve or thirteen years of age.

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It will be said that various religious bodies which have founded universities and colleges do not wish to let go their hold on advanced instruction. But who cares whether his son goes to a Baptist law school or a Presbyterian technical school? The question is, where can he get the best advanced instruction in view of his profession in life? It is in the intermediate colleges that the moral training is given.

Here again we fail to follow. The secondary school and the college were on the ground and passably well coördinated, before the university made its appearance. It is but reasonable to expect the latter to take the lead in the work of coördination, to place itself in line with the other two, since there is evidently room enough for all, and not to ask them to change their ground before occupying its own. The work of the college slightly overlaps that of the preparatory school, and rightly too. If it failed to do this, there would often be complaint that the secondary work did not reach up to the college work. In fact complaint of that sort is not unknown, even with the present condition of affairs. But the university work at present overlaps the entire work of the college, and even trenches on that of the secondary schools. Years ago the college was established to fill a field entirely unoccupied, and later the high school and academy came to occupy ground still vacant. Neither of them in their establishment had to ask any existing institution to withdraw or yield up ground previously occupied. So far the university has always demanded a share of the ground already covered. It seems to us that beyond this well tilled acreage there is field enough for the higher education. It is not as though the higher education were in itself a limited thing, or the demands and aspirations of learners were moderate and easily satisfied. There is a world of new ground in advance of any already occupied by colleges and secondary schools, which the university has only to go forward and occupy and the question of coördination will be settled. Let the university take university work and no other, and it will be strange if the overlapping of college and university does not come to be as harmless as that of college and secondary schools now is.

We sadly fear the question is largely one of students and of revenue. Many colleges in the west find it necessary, or think it so, which is just as bad, to sustain preparatory departments, partly because the revenue from them exceeds the expense of maintaining them, and partly because by that means they seem to make sure of future students. Is that not practically what the universities are at present trying to do? They provide eminent men in the different chairs, pay them ample salaries and hold them out as attractions to draw students. But the confiding freshman who enters the university may be handed over to the instruction of a young man just out of college without experience in teaching, without any special fitness as a teacher, without any intention of devoting his life to that work, but simply using it as a stop-gap or as a means for earning necessary funds for further study. But the freshman pays the same tuition as the senior. A hundred freshmen may bring fifteen thousand dollars into the coffers of the university, while the cost of the tutors to whom their work is confided may not be more than five thousand dollars. We recently have been curious to inquire into this very matter, and have taken for our sources of information four students in the first year at four different universities. Each of these institutions has in the list of its faculty many eminent men, well known for the ripeness of their attainments and for their good influence on young men, but in not one of these four cases could we find that the student had ever recited to, or come into personal contact with, any professor whose name or fame was known to us, and who, in reality, furnished the attraction which brought the student to the university.

We confess we should very much dislike to see the smaller colleges coördinated out of their place, or deprived of the special function they have so long performed. We have vivid and pleasant memories of college life in one of these institutions where the whole four classes would not in numbers make up half a freshman class in one of our great universities. We remember among other things, that with a single exception, all the work of the college course was done with professors whose names were familiar to us before entering college and whose qualifications for their work formed the reason for our selection of that particular college. Moreover they were not above teaching, or feeling a personal interest in, and obtaining a definite knowledge of the characters of, the students in their charge. The other day, we met a young man half through his course at one of our largest universities, who assured us that he had hardly had an hour with any professor in the institution since entering. One professor he had had, but when we next met that professor, he not only was unable to recall the young man who had spoken of him, but said that it would be entirely impossible for him to have any knowledge of two hundred students whom he met once a week for a single hour.

The suggestion that the colleges so revise their requirements that they include in the classics only what the universities of the country require at the beginning of their schedules, we do not exactly understand, unless it means that at present the universities require less for admission than the colleges. As to the suggestion that young men should enter college, as they used to do, at twelve or thirteen years of age, we doubt the wisdom of their doing so as much as we hesitate to believe that they ever did do it. Mr. White cited Edward Everett as an example, (though he spoke of him as entering at eleven, which is a year younger than Everett's age at entrance is usually given) and we know of other exceptional cases, one of them even younger than Everett; but boys within the last decade have entered Harvard at fourteen, although the average age of the class was five years beyond that. So that these exceptional cases prove nothing. The average age at Brown sixty years ago, (for the five classes from 1831 to 1835, inclusive,) was 18.9 years. That for the five years just elapsed, is 19.2 years. The average of entrance at Yale, said President Dwight, last October, "is now almost precisely what it was forty years ago, and seldom varies a fortnight." In the last thirty-five years, Harvard has advanced from seventeen years and seven months (nearly) to eighteen years and eleven months (nearly). We should be glad to know from the exact figures how the class that entered Cornell in '66 compares in age with that which enters in '91.

In this matter of coördination, it seems to us that the oldest and richest universities might well take the lead and formally make the announcement, that when the present sophomore and freshman classes have disappeared, by advancing along the course, the university work shall begin at the junior year,—in other words, that there shall be no freshman examination in 1892, and no sophomore examination in 1893. We have tried hard to look at the matter fairly, and we can see no more reason, if an attempt at coördination is seriously to be made, for maintaining the sophomore and freshman classes of the university than for maintaining a preparatory department at a college. So far as we can learn, the arguments for and against both are identical.

CHANCELLOR MC CRACKEN, UNIVERSITY OF THE CITY OF NEW YORK.

I agree with President White in asserting the need of coördination of academy, college and university. But I am reminded by his plan for meeting this need, of King Solomon's plan for satisfying the two mothers. He proposed to divide the living child in twain and give each claimant one-half. President White proposes to divide that living entity, the American college, in halves, and give the senior and junior classes to the future university, which he thinks is claiming this, and the sophomore and freshman half to the academy, which I am sure is not claiming or wanting any such division. But the wise Solomon did not really mean to divide the child. He was only seeking a solution of a difficult question. I fancy that President White is like Solomon, in that his great object after all is simply to stir us to work out this problem of coördination.

The title given in our programme recognizes these three institutions, the academy, the college, the university. The first two are well defined, the third is just beginning to rise into notice. America differs from England and Germany, in that she has three schools instead of two to care for students pursuing higher studies. Why not keep the American product, the four years' college course, between the academy and the university? By university, I mean all that is included in professional study, higher technological training, and especially graduate or advanced courses in arts and philosophy. Let the student spend from his twelfth to his sixteenth year in preparatory studies above the primary grade, from his sixteenth to his twentieth year in college. Then he can complete university and professional work by the time he is twenty-two or twenty-three.

America is growing richer than any other land; she will give her people more leisure for study than any other land; why should she not provide for continuing her youth in study a year or two longer than other lands?

There remains none the less need of careful coördination. The state cannot undertake it, but the colleges and academies can achieve it by voluntary compact. * * * In making this compact I would take from the academies a load which has been slowly accumulating upon them, and which amounts to a year or more of work that ought to be done by the colleges. * * * * Let us relieve the academies by taking back into the freshman year Homer and Cicero, and more of Latin and Greek composition, and let the boy enter college at fifteen or sixteen.

PROF. F. H. STODDARD, UNIVERSITY OF THE CITY OF NEW YORK.

It is perhaps possible that something resembling chaos has established itself as a condition in the mind of the listener in this hall, in the endeavor to form a notion of the present case, and future state, of the university system. For we learn such startling things concerning universities. In the afternoon of yesterday we learned that, until five years ago, there was a distinct tendency away from sincerity, away from morality, away from zeal, in the universities; but that there was now a prospect of regeneration by athletics. In the evening we learned that there was, likewise, in the colleges a tendency away from earnestness, sincerity, and intellectual honesty; but that there was a prospect of regeneration by technology. To-day we learn that the university methods are perfect; but that the results in the universities would be better than they are if only the academies and secondary schools were better than they are. Some universities propose, therefore, having themselves attained, to become even more perfect by renunciation, for we learn this morning that Cornell University, having become rich, proposes to retire in part from the trade of teaching and to send away her two largest classes to study in institutions not so excessively and inconveniently endowed.

From all this we gain the idea that something less than satisfaction with the universities is the attitude of scholars. The system somehow is not quite right. Two years are lost, said the speaker last evening, by the boy. Perhaps because of the time given to examinations, suggested the speaker. Now many of us do not agree that time given to examinations is time lost, for many of us owe our first certainty of ability to stand trial to the strain and stress of rigid examination. It developed an emergency organ (like the third stomach), and a very useful organ it has proved to us. A third stomach is a handy thing sometimes in the dry times of life, and the man with it sometimes stays while the men without it drop by the way. This particular remedy of solution by exclusion of a single factor we perhaps reject. And yet, if we reject all the suggested remedies, we still accept the fact of incomplete coördination between academy and college, and we ask how a more perfect coördination may be had.

For coördination we must have here. The tendency of the age is toward it. It may be said almost with absoluteness that the university, in the elder sense of the term — as a spot in which men, separated from the world, may become isolated and especial monuments of culture — is ceasing to exist. The university no longer lives to itself. It must be part of a system. If not metropolitan in situation as it probably should be, it must be cosmopolitan in thought. Coördinated effort, in the highest and in the lowest fields, in the ball team and in the university, has become a necessity. The result, if not the aim, of the older university was to separate the man of thought from the man of action. The man did his work and separately thought his thoughts. And the scholar, as interested in that which he was thinking, held himself apart from the man of action interested in that which he was doing. But the modern university makes life beget life and keeps in touch with every form of activity. It has ceased to be a cloister and has become a workshop. It appears then, that between the academy, the college, the university, and the professional school, there is somewhere a prodigious waste of force. The boy loses two years, said the speaker last evening. The boy must get to college earlier, says the college president; he does not know enough when he gets there to account for the time spent on the road. Likewise the university, in the interest of its graduate courses, calls out to the college to shorten its course; there is waste somewhere, it, in effect, says: the boy ought to do it in three years. The university is hardly needed at all, says the technologist; there is waste of force in the college years. In general it may, I think, be admitted that these various cries are indicative of a real area of distress and call for a remedy.

In looking for a remedy it is fair to note the manner in which this same problem has been treated by the men of action. The result desired is economy. The problem is the problem of conservation of wasted force. The remedy is to obtain articulation rather than coördination, concentration rather than exclusion. Now in manufacturing it was only lately discovered that economy of force was best gained by concentrating the processes. In cotton manufacturing, for example, the older method, like the present method in the older countries, was to give exclusive attention to the special part. The manufacturing industry was in the specialization stage of development. The spinning mill, therefore, spun but did not weave; the weaving mill wove but did not spin, and so on. It was learned later that perfection of mechanism implies not only specialist perfection but also articulative values. So the modern cotton mill in America has its departments united. Its carding department works for itself no longer, but for the spinning department, being governed thereto by the single director. Its spinning department is no longer a self-sufficient specialist, but works for the weaving department. In a word there is attained specialization of function with singleness of direction. In like manner our mercantile establishments and our railroads have taught us that the specialist is a servant and not a director, and that real economy of force is gained only by compelling the special part to lose its single life for the good of the organization. In some manner there is growth in this direction even among universities. In Germany it appears that Berlin grows faster than Halle, Jana, or Göttingen, specialist institutions though these have been.

In trade then, in business, in the whole world of action, it would appear that force is being conserved by the obtainment of completeness of articulation through concentration. The remedy I would suggest for the ills of the present university system is an application of the same process. Let the university lay hands on the college: — buy it, if possible; annex it, if purchase is impossible; lease it, if annexation is impossible; form an alliance with it, if annexation or lease is impossible. Then let the university and the college, thus united, lay hands upon the academy. Out of these elements let there be made an educational system retaining specialization of function with singleness of direction. Then would the competition be between completely articulated systems instead of between separated institutions compelled by their isolation to fight on the defensive. We should have nationalities instead of principalities in the educational universe.

PROFESSOR OREN ROOT, HAMILTON COLLEGE.

The difficulty that "a little learning is a dangerous thing," is that it is a little learned a little. If you take one book and know it all through and through, if you have one good truth and live by it, then you will have accomplished the work of a man before you get through. When a small college advertises that it teaches physics it does not need a $15,000 piece of apparatus in order to carry out that announcement. We can teach a little physics and teach it very well, and when a college says that it teaches a certain subject it would be eminently proper if it particularized the limits within which the subject was taught and then taught it within those limits. It is rarely possible to find out from a college catalogue how much algebra and geometry is taught in any particular college. They give me in a college course eleven weeks, four hours a week, to teach higher algebra. Higher algebra cannot be taught in eleven weeks with four hours a week. I can pick out the beginnings of certain subjects, and if boys have brains I can open the door and point out the way; they may follow it all their lives long and there will be higher algebra before them still.

The smaller colleges would willingly coördinate their work with the universities if the latter would plan the beginning of their courses where the former can properly end theirs. The American university is surely coming. Whether it be under the elms of New Haven, on the fields of Cambridge, or by the shores of Cayuga, it will surely come, but the American college still has a work to do. It will prepare men for the scholastic work of the university and the actual work of business life. The American academy also, is here to stay; it will fit men for the lower walks of life and prepare them for the colleges. These institutions are as necessary as are the common schools which give the primary education that belongs to American citizenship.

PRINCIPAL ROLAND S. KEYSER, MIDDLEBURY ACADEMY.

I want to say a word on this subject from the standpoint of the public school. About eighty per cent of the secondary schools under the visitation of the board of regents belong to our public school system. For more than a generation, college men have been crying for schools whose special purpose was to fit pupils for college; but they have not succeeded in getting them. The public, high, and union schools meet the wants of the time and will only be changed as the conditions which produce them change. When education was the privilege of the few, the universities controlled the work which was done in the schools below them, but they cannot do this when education has become a requirement for the many. The great educational forces of our time lie behind the public schools. The work of the public secondary school must be largely of a kind which will be of value to pupils who are soon to enter upon the active duties of life. It is idle for college men to say that pupils should early be taught certain things when the great pressure of influence on the public schools is for them to teach certain other things. It is true that a young man can go to college at the same age with a larger amount of Latin, Greek, French or German if these subjects are commenced sufficiently early, but it is safe to say that no amount of pressure of college requirements or influence of college authorities will avail to make these languages subjects of study in the great majority of our common schools. On no principles of general educational economy should the college do work which must be done in the secondary schools. As the requirements for admission to college have been gradually raised the additions have almost all been in the department of languages, which is where the secondary schools have the greatest difficulty in meeting them. The scientific courses seem to be so called because they fit so unscientifically into our scheme of education. The colleges seem to have cheapened the profession of engineering by advertising that almost no secondary education at all is necessary for those students. The work of the secondary school is a work which must be done for all pupils, and so long as possible it is important that the work of the secondary school be kept together.

The colleges have also injured the work of the secondary schools and injured themselves by not agreeing upon entirely uniform requirements for admission. There is hardly a college in this state that does not contain among its requirements for admission certain subjects not required by other colleges. A young man goes to his instructor at the end of his academic course and says, "I am going to college and find that I must study up this subject. What is the very least I can do to meet the requirements?" The college which puts in its requirements for admission subjects not required by other colleges, advertises for pupils poorly prepared in those subjects, and must take its choice between pupils poorly prepared or none at all. If the classical course is to be popular, our pupils must be prepared for it in our union and high schools. In order properly to suit the conditions of these schools not more than three years can be given to the preparatory work in languages. About a year ago the regents took the bull by the horns as regards this course and laid out a new college entrance course, lessening the amount of Latin and adding several other subjects better to suit the conditions of the schools. I have yet to learn that this course has been adopted in its entirety by a single college in the state. We have the anomaly of the University of the State of New York laying out a course for admission to the colleges and the colleges practically rejecting it.

In order to coördinate properly the work of the college and the secondary school, the college must cease to do work which legitimately belongs to the secondary school. A pupil who is preparing for the non-classical course needs the discipline and care of the school just as much as the pupil who is preparing for the classical course. As matters are at present, a large number of well prepared students in our secondary schools are entirely lost to college. When a young man has completed a course in a union or high school and wakes up to the fact that a higher education would be a good thing for him, he can find no course for which his preparation fits him. It seems to me that if the colleges want to profit by the work which the secondary schools are doing now, they should have more regard for the limitations of the work which we are doing now.

PRINCIPAL C. T. R. SMITH, LANSINGBURG ACADEMY.

The thought I would like to present to the Convocation is rather a query than a creed. For several years, in this Convocation and in our Principals' Association at Syracuse, we have discussed this question of coördination and articulation very much upon the basis on which it has been discussed this morning, and we do not seem to have arrived at satisfactory conclusions. Is it not possible that what we want to discuss and think about is the coördination of appliances, of subject matter, in our different institutions of learning? We know that a student teacher, fresh from college, employed to teach Latin in a secondary school frequently fails because he applies to his class the method of his professor in college. He fails and is led at last to see that there is a difference in the human mind at thirteen or fourteen and even twenty. He changes his method. He learns to teach and to interest his pupils. Do we not follow in the footsteps of that young man to some extent? Is it not true that in many cases we are applying methods that are inappropriate to the material we have to work upon? Should we not seek to coördinate our methods of instruction? We are told that in early childhood the perceptive powers are to be developed and we have a complete system of kindergarten work. Is it not true that the contrary view ought sometimes to be taken? At the commencement exercises of an important technological school in this state, a gentleman high in educational circles who has had opportunity to observe, stated that in certain institutions of technology the students are taught descriptive geometry successfully from models. That institution it seems to me was applying the method of primary school to the work of the technological school. It may have been a mistake. Is it not the greatest complaint that the principals of secondary schools have against the excellent system of regent's examinations that is in vogue in this state, that has done so much for the elevation of scholarship in the secondary schools of this state, is it not the principal ground of complaint that the system of examinations is not properly coördinated? The examinations in Virgil, and Cicero, and Cæsar seem to presuppose the same method of instruction for all these different grades of study, and indeed, the examination in the first year Latin, is sometimes open to the same criticism. It seems to me that what we want to give our attention to are the coördination and articulation of appliances of successive years of study, the coördination of methods in teaching; the taking care that the primary school shall apply its proper method, and that the secondary school shall use the methods that are appropriate to the budding intelligence of the young men and women confided to its charge, and that the college or university shall carry on this work where it was ended by the secondary schools. It seems to me that when President White, in the beginning of this discussion, advocated the enlargement of the facilities of the secondary school, that greater attention should be given to the academy and the high school, he left the work of the academy and high school an unknown quantity in his schedule of general education, and that in providing that the work of the common school should be made what it should be, and the work of the college should begin where the work of the common school leaves off, he seems to have eliminated that quantity. The academy and high school, as has been remarked here this morning, is the product of evolution in this state, and its work should be carried on with due regard to this secondary stage of education.

PRINCIPAL HENRY P. WARREN, ALBANY ACADEMY.

THE preparatory education of a child may be divided into three periods of four years each. The first period — the primary stage — should complete the mastery of the elements of number and of English. This should precede the study of foreign languages. A bright, earnest boy can accomplish this at ten, the average boy at eleven, the slow boy at twelve.

The next four years is the last period in the school life of the American boy who is to have a liberal education. It is given as a rule to geography, history, grammar, and arithmetic, studies of which a good knowledge can be gained incidentally if a more rational course of study is pursued during that period. In place of these utilitarian studies we propose that his time should be devoted to Latin, French, and German (conversational work and exercises for the most part), number, and simple applications of the same, inventional geometry, and simple English classics. For recreation teach the elements of the sciences inductively, geography, and history.

The third and last period should include the critical study of the grammar of the ancient languages, French and German, a large translation of the same, a thorough course in physics and chemistry, and the usual course in pure mathematics as far as calculus. Such a course would prepare a bright boy for admission to the junior class at Yale College at eighteen.

The advantages of such a course are: —

1. It is a natural and logical order. The study of languages should monopolize the time of a boy. Forms, inflectional and idiomatic, and pronunciation, the drudgery of languages, are mastered with delight in boyhood when the eye is keen and the ear accurate; the study of structure or grammar naturally follows; later a large and critical translation.

Mathematics are kept in the background, inventional geometry and number, with simple applications, have a minor place in the course until the mind can grasp algebra and the intricacies of geometry; their study may then be pursued intelligently and rapidly. Science is taught inductively at first; later a knowledge is gained of its mathematics.

2. Preparatory work should be finished where it is begun, in the preparatory school, and not divided between school and college. The first two years in most colleges is a pitful waste of time for students well-prepared and a pitiful scramble after the unattainable for those ill-prepared. All subjects taught primarily for their value as discipline should be taught by masters selected for their ability to teach. Forms, facts, things, principles, should be mastered in the preparatory schools; investigation, comparison, generalization, are the work of the higher school, call it college or university.

The eastern colleges have made their work of the last two years substantially elective; they await a movement all along the line in preparatory schools to make elective the work of the first two years.

3. There is a saving of two years in time in the education of a boy. This is a matter of importance, but of less value than the other considerations.

In brief, the American boy runs to waste between ten and fourteen; he is engaged in work that is no part of a liberal education. The training I suggest uses economically and intelligently that period. It but follows substantially the course pursued with such marked success by the nations which lead in education.

PROFESSOR MUNROE SMITH, COLUMBIA COLLEGE.

When anybody indicates disapproval of the method in which administrative officers are appointed in this country, we are told, "that is America." When anybody suggests taking appointments out of the hands of the politicians by means of competitive examinations, we are told, "that is Chinese." Similar arguments appear when we endeavor to improve our system of voting. It was such misuse of patriotic argument, I think, that led Doctor Johnson to speak of patriotism as the last refuge of scoundrels. I think it may be safely said that the patriotic argument seems to indicate a lack of other logical arguments.

I have also heard it said that the American was specially American, and that because it was American, it ought to go on exactly as as it had gone. It does not seem to me that the American college is in any sense specially American. The American college stands now in a stage, or rather in several stages, of evolution through which the colleges of Europe have passed. At first the schools in Europe were distinctly elementary schools, like those first established in this country. In Europe, there has been a long process of development by which some of these schools have enlarged their work, throwing the work they used to do on the preparatory schools. It proves that the American college is not peculiarly American, it is simply a stage of evolution, and to ask us to pin ourselves to a stage of evolution, is preposterous.

A generation ago the American college was fitting men for many other professions than the clerical, but it was still simply a fitting school for the professional schools and hardly anything more was attempted, and there was no university in this country at all. This university work was represented by scattering professional schools, and a great deal of university work was not done at all. Then all these new subjects began to crowd themselves into the college course. The result was a total change in the character of the last year in college, until the American college has come to be something that is partially gymnasium in character and partially university in character. The senior year in most of the colleges resembles part of the philosophical faculty of a German university, both in studies covered and in methods adopted. This is why the argument that we should cut the American college in two is a logical one. We should at least throw off the lower years of those colleges which are capable of doing university work and make them universities. So far as the present condition of things is concerned, I think that what we need is more evolution. I think we must draw the line as carefully as we can between gymnasium work and university work, but I think it a little too soon to decide just which institutions can become universities, nor do I think it advisable for the colleges to throw off their earlier years. I think things have got to go on as they are going for a while. If the smaller colleges are absolutely unable to stand the rivalry and competition of the institutions that are able to give more advanced work, then I suppose there will be a coördination between the colleges and the larger institutions.

GEOMETRY BY TEXT-BOOK AND SYLLABUS.

JOSEPH V. COLLINS, MIAMI UNIVERSITY, OXFORD, OHIO.

In the study of Euclidean geometry, the mind is, or at least should be, developed in various ways. In the first place the imagination is used in abstracting geometrical concepts from real objects, and in conceiving figures together with their properties. Then again the mind is trained in the power of connected reasoning where several particulars have to be held in mind during the progress of a demonstration, and the relations of separate propositions and sets of propositions must be perceived. A third line of training is in logical accuracy. For the first time, perhaps, the student is impressed with the idea that mathematics is accurate or it is nothing. It is the author's province to see that he makes no slips either in the demonstration of propositions, or in the application of underlying principles, and no author worthy of the name fails to aim at this high ideal. From still another standpoint, geometry is what one may call a philosophy of space relations. The old Egyptian geometry was a mensuration. The Greek geometry, which we have, sought to be and was theoretical in materials and treatment.

If this is the scope of the training in geometry, the teaching of it ought to develop all the mental faculties concerned, and that to the best advantage. Now the ultra-conservative method of teaching geometry is for the student to go over the demonstrated propositions so as to understand the proofs and be able to give them. The ultra-radical method is for the student practically to make his own geometry by the aid which the teacher gives him from his store of knowledge on the subject. Between these extremes there is a wide range for variety. The objection to the first method is that by it the student's originality is not developed, that one so disposed is given the opportunity of learning his geometry by memory rather than by reason, and that there is no exercise in the mastery of new propositions. In its defense it may be urged that by it the student has the best models always before him, and it is for this very reason that many of the ablest professional mathematicians, such as DeMorgan, have so earnestly defended the retention of Euclid in the schools. The objection to the latter method (which otherwise has much to commend it) lies in the great difficulty which the average student has in understanding the subject without much help from the teacher which a text-book would give in better form; an even greater objection is found in the imperfect knowledge of the subject on the part of the *teacher*. It takes years of study to be able to write a satisfactory text-book on geometry, and for such study very few teachers have the time or inclination. Manifestly, then, to get the best results some middle ground must be chosen. To suggest a course is the purpose of this article.

The plan proposed is in brief as follows: — To use some approved text-book, (if the book followed does not contain exercises in the text, they should be introduced by the teacher) going over the whole of plane geometry, or at least three or four books. Then to use a syllabus, altogether different from the text-book, and containing much new material, theorems, problems and other exercises, along with what is necessary of theorems and problems given in the book. The proofs of these last may, of course, have to be altogether different from those previously given. This syllabus should be prepared by the individual teacher, himself or herself.

Such a course will include both methods of teaching the subject, and, moreover, will better qualify the teacher for the work. Indeed it may be doubted whether any better training for the teaching of geometry could be found. By it the teacher would be obliged to compare the definitions and demonstrations of various authors, and to exercise his own judgment on every question of difference, besides training his own constructive powers and being forced to know thoroughly all work so outlined. It may be objected that not many teachers would be able to construct a syllabus. But this is not necessarily true. Certainly it ought not to be as difficult for a teacher to prepare a syllabus with the aid of the various text-books at hand, as for the student to construct the demonstrations for the syllabus when made. Doubtless such systems would vary greatly in value, but that is true of text-books themselves. To show how such a syllabus can be constructed, based if thought desirable on some particular author, parts of one are given in this article so connected as to give a fair idea of the whole. It is based on that of the *Association for the Improvement of Geometrical Teaching*, Byerly's Chauvenet's Geometry having been used as the text-book. Particular attention is to be called to the "Exercises."

The following inexpensive text-books have been drawn on in the preparation of the syllabus, and are strongly recommended to teachers:—(1) Hall and Stevens's, (2) Todhunter's Euclid, (3) Chauvenet's, (4) Loomis's, (5) Wentworth's, (6) Wells's geometries, (7) Hill's *Geometry for Beginners*, (8) Syllabus of the Association, (9) MacDonald's Syllabus, (10) Spencer's *Inventional Geometry*. Besides these text-books (11) Ball's, *A Short History of Mathematics* and (12) Gow's *History of Greek Mathematics* should be in the hands of every teacher of mathematics. Macmillan & Co., New York, publish (1), (2), (8), (11) and (12). D. Appleton & Co., New York, publish (10), and Ginn & Co., Boston, (7), both of which contain a great deal of material which can be utilized for miscellaneous exercises. Ginn & Co. also publish (5), Allyn & Bacon, Boston, (9), Lippincott, Philadelphia, (3), Harpers, New York, (4), and Leach, Shewell & Sanborn, Boston, (6).

SYLLABUS. (Selections.)

INTRODUCTORY DEFINITIONS.

1. All the definitions in Byerly's geometry, paragraphs 1-7 inclusive, except the definition of a straight line (page 10). Also the other definitions scattered through the text. For the excepted definition we substitute,

2. A *straight line* is such that any part will, however placed, lie wholly on any other part, if its extremities are made to fall on that other part.

Remark.—See Euclid's definition, page 1, Todhunter's Euclid.
Loomis's " art. 8, page 12.
Chauvenet's " page 10, Byerly.
Aristotle's " " 176, Gow's History of Math.
(The writer much prefers Chauvenet's.)

3. When the sides of an angle are in the same straight line extending in opposite directions the angle is called a *straight angle*. There are thus two straight angles side by side equal to each other. By the definition of a right angle, one straight angle is equal to two right angles.

[See for clearest conception of an angle, art. 3 in Byerly.]

4. Relations of theorems, logical distinctions.

The typical theorem is of the form,

If A is B then C is D, (1)

the first clause containing the hypothesis, while the second contains the conclusion. Now, denying the conclusion, we have:

If C is not D then A is not B. (2)

The latter proposition is named the *contrapositive* of the former as defined in art. 18, Byerly. The converse of a proposition is a second proposition in which the two parts are interchanged, the conclusion becoming the hypothesis. Thus the converse of (1) is

If C is D then A is B. (3)

The contrapositive of (3) is evidently

If A is not B then C is not D, (4)

this last being termed the *obverse* of (1).

A *contrapositive* is always true if its direct theorem is true. A *converse* theorem is not necessarily true when its direct theorem is true.

Rule of Conversion:—If the hypothesis of a set of theorems contain all cases, and if the conclusions are such that no two can be true at the same time, then the *converse* of every theorem of the set will necessarily be true.

5. Axioms of geometry.*

(1. Through two points there can be made to pass one and only one straight line, and this may be indefinitely prolonged either way. (Consider this axiom in the light of the definition of a straight line.)

(2. Two straight lines which meet in one point can not meet again unless they coincide.

(3. Through the same point there can not be more than one straight line parallel to a given straight line.

6. In what follows no theorem may be appealed to unless it has already been proved in the order here laid down.

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* The *general* axioms of mathematics, such as "If equals be added to equals the sums are equal," "Halves of equals are equal," etc., are of course used in geometry. Those peculiar to geometry only are given above.

BOOK I. Properties of Rectilinear Figures.

A. THEOREMS.

Section I. Angles at a Point.

7. Proposition I. All straight angles are equal.

Cor. 1. All right angles are equal.

[An axiom in Euclid. Demonstrated by Loomis, Wentworth, etc. Here it follows directly from the proposition; by its definition, a right angle is half of a straight angle, and all straight angles are equal.]

Cor. 2. At a given point in a given straight line only one perpendicular can be drawn to that line.

[See definition of a perpendicular, and Cor. 1.]

8. Prop. II. If a straight line stands upon another straight line, it makes the adjacent angles together equal to two right angles.

Cor. All the angles about a point make four right angles.

9. Prop. III. If the adjacent angles made by one line with two others make two right angles these two lines are in one straight line.

10. Prop. IV. If two straight lines cut one another the vertically opposite angles are equal.

Section II. Triangles.

11. Prop. V. If a perpendicular is erected at the middle point of a straight line, every point in the perpendicular is equally distant from the extremities of the given line.

Cor. 1. If straight lines are drawn to the extremities of a straight line from any point in the perpendicular erected at its middle point, they make equal angles with the line and with the perpendicular.

Cor. 2. Since two points determine a straight line (ax. 1) if there be two points each equally distant from the extremities of a straight line, the line joining them is perpendicular to the other at its middle point.

Cor. 3. The perpendiculars erected at the middle points of the sides of any triangle meet in one and the same point.

12. Prop. VI. If two triangles have two sides of the one equal to two sides of the other, each to each, and have likewise the

angles included by these sides equal, then the triangles are identically equal, and of the angles those are equal which are opposite to the equal sides.

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16. Prop. X. If two angles of a triangle are equal the sides opposite are equal.
17. Prop. XI. If any side of a triangle is produced, the exterior angle is greater than either of the opposite interior angles.

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22. Prop. XVI. The altitudes upon the legs of an isosceles triangle are equal. What is the contrapositive?
23. Prop. XVII. State and prove the converse of XVI. What is the contrapositive?
24. Prop. XVIII. $A B C$ is an isosceles triangle having $A B = B C$; and angles at B and C are bisected by lines which meet at O; prove that $O A$ bisects $B A C$.
25. Prop. XIX. In the equal sides $A B$, $A C$, of an isosceles triangle, $A B C$, two points X and Y are taken so that $A X = A Y$, and $C X$ and $B Y$ are drawn intersecting in O. Show that:
    1. The triangle $B O C$ is isosceles.
    2. $A O$ bisects the vertical angle $B A C$.
    3. $A O$ if produced bisects $B C$ at a right angle.
26. Prop. XX. If two sides of a triangle are unequal the greater side has the greater angle opposite.
27. Prop. XXI. State and prove the converse by the rule of conversion.
28. Prop. XXII. Any two sides of a triangle are together greater than the third side.

    [This theorem is an axiom in Byerly, Olney; the definition of a straight line in Chauvenet, Loomis, Wells; an assertion in Wentworth.]

    Cor. 1. Any side of a triangle is greater than the difference between the other two sides.

    Cor. 2. If a perpendicular be erected at the middle point of a straight line any point not in the perpendicular is unequally distant from the extremities of the line.

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Section III. Parallels.

37. Prop. XXXI. If a straight line intersects two other straight lines and makes the alternate angles equal the lines are parallel.

Cor. 1. When it makes the corresponding angles equal the lines are parallel.

Cor. 2. When it makes the sum of interior angles on the same side of the secant equal to two right angles, the lines are parallel.

38. Prop. XXXII. If two straight lines are parallel and are intersected by a third straight line, the alternate angles are equal.

[This theorem, the converse of XXXI, is proved in Euclid by means of his 12th axiom, page 6, Todhunter. There has been an immense amount of discussion over this axiom, and some go so far as to doubt whether Euclid himself used it. In its place Playfair suggested that given as (3, in art. 5, which is often called Playfair's Axiom. It is used by most authors who do not follow Euclid's treatment of parallels. Thus Loomis, Chauvenet, Wentworth, etc. This axiom is proved by Byerly in prop. XXIII, B. I.]

39. Prop. XXXIII. Two angles whose sides are parallel are either equal or supplementary.

40. Prop. XXXIV. Two angles whose sides are perpendicular are either equal or supplementary.

41. Prop. XXXV. Parallel lines are everywhere equally distant.

42. Prop. XXXVI. State and prove the converse.

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46. Definition (not in use). An *equiquadrilateral* is a quadrilateral whose opposite sides are equal.

47. Prop. XL. In an equiquadrilateral the opposite angles are equal and the opposite sides parallel.

[It is evident that an equiquadrilateral is identically the same as a parallelogram. But all proofs must conform to the definition either directly or indirectly.]

48. Prop. XLI. If two opposite sides of a quadrilateral are equal and parallel the figure is an equiquadrilateral.

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59. Prop. LII. If perpendiculars AE, BF, CG, and DH, be drawn from the vertices of a parallelogram to any line in the plane, then $AE + CG = BF + DH$.

60. Prop. LIII. If a straight line drawn parallel to the base of a triangle bisects one of the sides, it also bisects the other and is equal to one-half the base.

Cor. 1. State and prove the converse.

Cor. 2. In a trapezoid the straight line joining the middle points of non-parallel sides equals one-half the sum of the parallel sides.

Cor. 3. The perimeter of the parallelogram formed by joining the middle points of a quadrilateral is equal to the sum of the diagonals of the quadrilateral.

61. Prop. LIV. A billiard ball is placed at any point, P, of a rectangular table $A\ B\ C\ D$. In what direction must it be struck to cause it to return to the same point P, after impinging successively on the four sides of the table?

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B. PROBLEMS.

With Rule and Compass.

64. Prop. LVII. To bisect a straight line.

65. Prop. LVIII. To draw a perpendicular to a line from a point within and also from a point outside it.

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70. Prop. LXIII. Trisect a right angle.

71. Prop. LXIV. On a given base describe an isosceles triangle having the sides double the base.

72. Prop. LXV. From a given point draw a straight line that shall make with a given straight line a given angle.

73. Prop. LXVI. Draw a straight line through a given point so that the part of it intercepted between two given parallel lines may be of given length.

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C. EXERCISES.

Use x for the unknown in such places as it may be found convenient.

80. How many degrees are there in an angle whose supplement is three times its complement?

81. How many degrees are there in each of the angles of an isosceles triangle, the vertical angle of which is three times either of the base angles?

82. The angle B of a triangle is three times that at C, and A is three times B; what is the size of each angle?

83. How many sides are there in the polygon, the sum of whose interior angles exceeds the sum of its exterior by 540°?

84. Prove that the number of diagonals of a polygon of n sides is $\frac{n(n-3)}{2}$.

85. Find the magnitude of each angle of a regular polygon of n sides.

86. Divide an equilateral triangle into four parts equal and similar; into six parts; into three parts.

87. Divide a square into four equal and similar figures in at least four ways.

88. Can you construct a triangle whose sides are 8, 9, and 18? One whose sides are 5, 6, and 11? One whose sides are 3, 4, and $1\frac{1}{2}$?

89. Place a hexagon in an equilateral triangle so that every other side of the hexagon may touch a side of the triangle.

90. Construct different patterns of tile pavements out of regular polygons (equilateral triangles, squares, pentagons, and hexagons).

91. Make a seven rayed star and find the sum of the seven acute angles.

92. Make a paste-board protractor like a wooden protractor, and measure, after estimating with the eye, different sizes of angles.

93. Make a few triangles of different forms, and measure by the protractor the angles of each, and see how much the sums vary.

94. Make a pentagon outside a circle by means of the protractor.

95. Make a heptagon (7 sides) by means of the protractor, not using any circle.

96. Measure on your protractor the *chords* of all angles from 1° up to 90°. Now, the radius of your protractor being say 6 inches, if you divide your values for each chord by 6 (to 3 decimal places) you will obtain the lengths of the corresponding chords to radius *one* inch; or, since the values are proportional to the radius, to ONE *any unit*. Arrange the results in the form of a table, placing the degrees in one column and the lengths of the chords in another. The results may be

compared with the values of the sines in a table of natural trigonometrical functions by doubling both degrees and sines.

These chords can be marked off from one end of a line drawn on the protractor (preferably parallel and near to the edge). This will enable you to tell the size of an angle, or arc, of 6 inch radius, when the chord only is given.

97. Which chord is equal to the radius? Is this known in advance?

98. Make a triangle whose sides shall be 21, 15, and 12, and measure its angles by the line of chords, and by the protractor. Take $\frac{1}{4}$ inch $=$ 1, for the scale.

MISCELLANEOUS THEOREMS, PROBLEMS AND EXERCISES.

[The restriction, art. 6, is not intended to hold with reference to the following.]

99. Theorem. From any point in a circle the farthest distance to the circumference will be on the line passing through the center.

100. Theorem. The opposite angles of an inscribed quadrilateral are supplements of each other.

101. State and prove the converse.

102. Prove that the radius is two-thirds the altitude of an inscribed and one-third the altitude of a circumscribed equilateral triangle.

103. Theorem. Prove the Pythagorean proposition by as many different demonstrations as possible.

104. Problem. Construct by geometry an angle of 60°; of 120°; of 30°; of 15°; of 45°. Divide the last into three equal parts.

105. Given a chord and a point in the circumference, to construct the circle.

106. To describe a circle to touch a given circle and also to touch a given straight line.

107. Exercise. Invent a method of dividing a circle into four equal and similar parts having boundaries other than the radii.

108. Place a square in a semicircle.

109. Show by a figure the arithmetical mean to 3 and 12.

110. Show by a figure the geometrical mean to 3 and 12. Which is the greater?

111. Extract by geometry the square root of 5, and prove by arithmetic.

112. Make a semicircle equivalent to a circle.
113. Measure the vertical height of an object (tower, tree, etc.) by means of a shadow.
114. Take two points, *A* and *B*, a given number of feet apart. Draw a line *A B* to scale (say $\frac{1}{2}$ or $\frac{1}{4}$ inch to the foot). Then if *C* is a third point, by means of two rulers turning on a pivot, measure the chords (to same radius as your protractor) of the angles *A* and *B*. Then plot these angles at the extremities of the line *A B*. Then measure *A C* and *B C* and reduce their lengths to feet and compare the results with the actual measured distances.

BOOKS RECEIVED.

American Literature; an elementary text-book for use in high schools and academies, by Julian Hawthorne and Leonard Lemmon, Superintendent of city schools, Sherman, Texas. Boston: D. C. Heath & Co. 1891.

As is suggested by its dual authorship, this book has both a literary and a pedagogic side. On the one hand it undertakes to give critical and classified accounts of authors and their works, and on the other it prints selections and teacher's questions. In this respect it reminds us of Mr. Fiske's text-book of Civil Government with its appendices of questions by Mr. Hill.

In critical expositions prepared for youth everything depends on the aim and the tone. The authors of the book we are noticing seem to us to have overshot their mark. As an old high school teacher, we cannot conceive by what fatuity of mind two adult men, one of them professedly an educator, have planned and executed for boys and girls, under the guise of a text-book, a series of chapters of criticism so irrelevant to its professed purpose. The youth we know will certainly be neither interested nor edified by such a book as this. It bears no mark of adaptation to a juvenile public. The book must of course be judged by its professions. We are not called upon to say whether we do not find considerable felicity of phrase and occasional acuteness of discernment. The book claims to be "for use in high schools and academies"; and for such use we pronounce it totally unsuited. It consists of critical essays peculiarly lacking in appreciative warmth and peculiarly abounding in the various formulas of degradation and denial. The impression it makes is that the writers of our literature, on the whole, failed in their ambitions and produced work profoundly tainted with faults. The teacher has no business thus to overcloud with disparagement and depreciation any subject whatever to which he is about to ask the attention of his pupils. Young persons who have not yet made the acquaintance of a writer do not need an introduction to him through a criticism. If it is worth while to undertake in class the study of an author as yet unknown to the pupils, the only reasonable overture to such study is a direct reading, under all possible encouragement, with expectation fully aroused, and without the least suggestion of doubt as to the literary rank of such writer, of the most interesting and characteristic specimen of his work that can be found. Young people are not critical, and cannot be made so, even were this a desirable consummation, by making them read criticism that they cannot understand. Should a pupil of ours take to writing in the critical tone about his reading, we should consider it a morbid symptom ; and should he profess to find pleasure in such reading as makes the staple of this book, we should set him down as the most wayward and hopeless of learners.

The tone of the book fails to please us equally with its ill-judged pedagogic aim. Literary exposition intended for youth should of course have all possible light ; but its sweetness should be overflowing. The true function of such a text-book is to inspire and stimulate. There is no danger lest young people come to think too highly of their country's writers. Every teacher should talk up his theme, and never talk it down or suffer his text-book to talk it down. The depreciation necessary to mingle with one's praise were one instructing mature readers liable to too much national pride, is wholly out of place in the first invitations to youth to become acquainted with the makers of American literature. We are sure that young readers would bring from the perusal of these chapters a prevailing impression of the inferiority and small worth of the literature of their country.

As a book to put into the hands of pupils, the work of Messrs. Hawthorne and Lemmon is not to be thought of for a moment. Yet it may be commended to teachers, at least for a single reading, though we doubt if any teacher would find in it the quality entitling it to become a *vade mecum.*

Mr. Julian Hawthorne has a certain rank as a contemporary writer; but we cannot possibly assign to him such value as a classic that we should be willing to put his work into the hands of our pupils for careful study as a model of English or as a vehicle of information of great importance. Books for use in school in the study of English should be the eminent classics themselves, and not criticisms of these classics. If a manual of the history of the literature is desired, this should be a very small book, giving brief outlines of lives, and making prominent the greatest productions, with such characterization as should stimulate curiosity. To mingle detraction and derision with one's teaching is to confess one's self no teacher.

Of the pedagogical side of the book we would speak far more favorably. This consists of lists of questions appended to the various selections. The wise teacher will not omit to ask test questions, to make sure that his pupils are intelligently giving their minds to what they are reading. Mr. Lemmon's questions are not without suggestiveness. Usually a teacher's question is a suggestion of the moment. To plan one's questions in advance, however, is well, provided one is ready to omit asking them, if they are evidently not needed. To accept a question-list from an editor is right only for the youngest teacher. The teacher who is a master of his art will insist on being his own questioner.

Eight Books of Cæsar's Gallic War, by William Rainey Harper, Ph. D., and Herbert Cushing Tolman, Ph. D., Yale University, New Haven, Conn. New York, Cincinnati, Chicago: American Book Company.

We never have been one of those who believe that Cæsar is an author well fitted for the first work in reading Latin. Neither have we ever been able to believe fully in the extreme inductive method. As a reaction from the excessive memory work which was forced upon pupils in Latin for the first two years of their course up to a comparatively recent time in this country, and to a still greater extent in England, the inductive method has been a great boon. We think, however, that it is simply the outward swing of the pendulum, which is bound soon to fall in the other direction and with all the more rapidity and force the farther it has swung the other way.

If, however, one really believes in the inductive method and really thinks that Cæsar is a good author with which to introduce young children to the Latin language, the edition of Harper and Tolman seems to us an excellent one. There is care and painstaking visible on every page. The taste displayed in the mechanical execution of the book is superior to that displayed in any of the preceding classical books issued by the same firm. Especially noteworthy are the maps, which are the finest we have ever seen in a school edition of an ancient classic. The introductory matter is brief, comprehensive, and generally well put, although displayed in a manner that impresses one as rather fragmentary. In the text all words are printed in distinguishing type the first time that they occur. This idea will strike many teachers as a happy thought. To those who do not follow the inductive method its chief disadvantage will be that the constant changes in the forms of the letters will be apt to be trying to the eyesight. Those who use the inductive method will almost unavoidably be prevented from beginning anywhere except with the first chapter, and from making omissions or selections as many teachers wish to do. Grammatical references are given at the bottom of the page and at the outset are quite abundant. The notes proper are placed between the text and the vocabulary and are very brief. This is not a new idea, as those will easily remember who thirty years ago studied Andrews's Reader, or Hanson's Latin Prose Book. For many years, however, it has been the custom to separate grammatical references from the body of the text. Exactly why the method of Andrews and Hanson was generally abandoned we hardly know. Possibly it was because pupils got in the habit of learning the rules by number, and so were able without much thought, by a glance at the foot of the page, to give correctly the required construction. The introduction of these formal rules into a book based upon a purely inductive method seems a little inconsistent, though from our own point of view, the book is better with them than without them.

Of the special features of the book, those which strike us as most valuable, in addition to those already mentioned, are the exercises in Latin composition, the mentioning in the vocabulary of the number of times each word occurs in Cæsar, and the geographical and other indexes. There is a brief bibliography of Cæsar and of the Gallic war, and a table of idioms. Those which strike us as of the least value are the word lists and the classification of words. In the notes there should be an indication in the running title of what particular book the chapter annotated forms a part.

On the whole, this edition ought to be welcomed as a genuine contribution to the apparatus of the school room. It is evidently not hack work at all, but the labor of those who thoroughly believe in the system which they advocate, and which seems to them to secure the best results. One can concede high praise to the work that they have done, without believing that they have followed the ideal method, or produced an ideal book.

Edmund Burke. Speeches on the American War, and Letters to the Sheriff of Bristol. With Introduction and Notes. By A. J. George, A. M. D. C. Heath & Co. 1891.

Mr. George has performed his task very well. First, he did well in his conception of a selection of English oratorical prose. For precisely in this department of our literature our school texts were deficient. Yet there is no better reading for the class-room than the great speeches made by statesmen at memorable historical crises. No other portions of literature connect themselves so vitally with events that are already understood by youth and have already enlisted their sympathies. Hence we wonder when we see schemes of literary study that cull from the poetry of all periods but say nothing of the oratory of any period. We are slow in lifting ourselves out of the bondage in which we must all painfully read some portion of Cicero, but may all neglect to glance over a page of Burke. But we are lifting ourselves surely, if slowly; and the signs of our uprising are the books, like this of Mr. George, which the new conception of scholarship is evoking.

Secondly, Mr. George did well in giving to his selections from Burke a unity of theme: these selections all pertain to the American War. Every school-boy and every school-girl in the country knows that in our great quarrel with Great Britain, Burke was our champion in Parliament. This book gives us the very words he uttered in conducting this championship. It would seem to be the book of books to put into the hands of youth who have just finished their school course in American history.

We have been much impressed, in looking over these selections, with the excellence of Burke's prose as a theme of study. Perhaps not very much more study of it is needed than diligent and persistent reading of it, for it is by simple contact with good English that one catches its influence and appropriates something of its strength. This is a style to associate with rather than to dissect. This is a living speech in a living language. These burning words, so majestically ordered, setting forth issues still so fresh and so profoundly moving, are the same words that Webster charged with equal heat and mashalled with no less splendor in the defence of a cause still nearer to our interests and dearer to our hearts. With the great patriotic oratory of England and America our youth should have the opportunity to become familiar. Surely something should be spared from our programmes that this may have a place.

Mr. George has done well, again, in his annotation. Where the intelligent reader feels the need of a word of explanation, but hardly knows how to go to work to find this explanation himself, Mr. George is pretty sure to give him what he wants, without overloading him with more than he needs or could carry away. Annotators have been wont to seek all possible opportunities for the making of notes. But the educational annotator should sacrifice all ambition to display his learning, and think only of educational ends. Mr. George is a teacher, and understands the needs of the classroom. Hence he does not overdo his annotation. He gives us 17 pages of notes to 221 of text.

An Etymological Dictionary of the German Language. By Frederick Kluge, Professor in the University of Jena. Translated from the fourth German edition, by John Francis Davis. London: George Bell & Sons. 1891.

This translation of Kluge's Etymological Dictionary will serve the purposes of two distinct classes of students. It is quite conceivable that there should be persons eagerly pursuing general or Teutonic etymology who have not had time to acquire practical command of the German language. Then there is the very large body of students of English, many of whom are unable to read German, who have learned to know Kluge by hearsay as an unimpeachable authority, and would gladly appeal to him in cases of difficulty. To translate, therefore, into English this all-important treatise on German etymology was by no means a superfluous task.

With any professed work on English etymology, such e. g. as Skeat's, the book does not, of course, come into the least competition. The English etymology is properly an incident of the book. The references to English words, however, are made accessible by means of an English index which contains some 2200 words. The advantage of using Kluge in English study is the feeling of absolute trustworthiness that goes along with such use, the feeling that whatever modern etymological science knows is here given in the clearest and briefest form. One soon learns that etymological explorations are full of hidden pitfalls, and that a severe incredulity must be perpetually the mental attitude of the explorer. Such books as those of Trench on the study of words have engendered the notion that the etymological field is a domain of marvels, abounding in mild intellectual excitements. The silly view of etymology could not possibly have a better corrective than the habit of reference to the book of Kluge. Therefore we decidedly commend this translation as an eminently suitable addition to the reference library of any high school. It should be taken for granted that a school that thinks seriously of purchasing Kluge already has its copy of Skeat.

The English book is handsomer than the German one. Were we to choose between the two for our own use, we should, contrary to our usual practice, in this case prefer the translation.

100 Themen zu pädagogischen Aufsätzen Bearbeitet von Carl G. E. Patzner. Langensalza, 1890.

Pädagogische Goldkörner. Eine Sammlung pädagogischer Sentenzen für Lehrer und Erzieher. von Carl G. E. Patzner. Langensalza, 1890.

From the preface to the former of these two books we learn that it is the second of a series of two, the former of which bore the title "200 Dispositions." Both these works, the two-hundred dispositions and the one-hundred themes, seem to have the same object in view. This object appears to be to furnish to intending writers of pedagogic papers correctly arranged outlines or skeletons. The "hundred themes" occupy 368 pages. Thus each theme occupies, on the average, something over three and a half pages, in which space it is set forth analytically, according to formal rules, under main heads, with far-reaching division and subdivision. The themes are the conventional ones, and the treatment regards the teaching of the rhetorics.

The second of the books whose titles we give at the head of this notice, the "grains of pedagogic gold," is made to accompany the volumes of Themes and Dispositions. It contains 1183 grains. These are apothegms, sententious and quotable phrases, memorable sayings, culled from various writers, all classified and ranked for due ease in finding. The editor's purpose was to make absolutely complete the equipment of any pedagogue who proposed to himself to write an educational paper. He should not even have to read authors in order to quote them. For a mark or two he should be able to put a mass of excellent matter for quotation in his pocket.

It will be interesting to note that the quotations come from Goethe more than from any other writer, and that then follow, in descending order, Diesterweg, Rückert, Gotthelf, Jean Paul, Schiller, Wiese, Pestalozzi. In the list of authors quoted we count 324 names. These are mostly, of course, the names of the classics of German literature or of German pedagogy. But the ancients are fairly represented, as are also the moderns of other nationalities. The book is interesting. Every teacher should have a similar collection in process of growth, and always abstain from indulgence of the notion that it would be well to give it to the world.

A Dictionary of Classical Antiquities, Mythology, Religion, Literature and Art. From the German of Dr. Oscar Seyffert. Revised and edited with additions by Henry Nettleship, M. A., and J. E. Sandys, Litt. D. With more than 450 Illustrations. London: Swan, Sonnenschein & Company. New York: Macmillan & Company. 1891. Price, $6.00.

Hitherto the best English work on Antiquities, that of Dr. Smith, has been hardly available to ordinary students on account of its high price, and there has been need of a book containing later results than Dr. Anthon's for the purposes of secondary schools. That work has at last reached us, thanks to the careful labors of Dr. Seyffert and his English co-workers, supplemented by the abundant resources of a great publishing house.

It is hard to speak of this volume without seeming to be extravagant. The type, paper, illustrations, and margins are a delight to the eye. The publishers seem to have spared no expense and the editor to have grudged no labor to make it an ideal book. The English editors have even improved on the original German work, excellent as that is, especially in the illustrations, and in the introduction of new matter relating to art and artists. The article on Vases or that on Toreutic Art well illustrates our meaning. Throughout the book the quantities of vowels in both Greek and Latin words have been marked, apparently with great care, when they first appear. Of the matter not ordinarily included in a dictionary of antiquities that relating to mythology, art, literature, and religion will be gratefully appreciated.

The price of the book, six dollars, is low when the quality of the work is considered; it will, however, doubtless be an obstacle to its extensive sale to individual students. But no secondary school and no library of any sort can afford to be without it even for a single month.

Part I. of Volume III., E — Every, of the New English Dictionary has come to hand, anticipating the parts that are to form the latter half of Vol. II. While the dictionary as a whole bears the name of Dr. James A. H. Murray as responsible editor, and all the preceding parts are of his authorship, the new part appears as the work of Mr. Henry Bradley, President of the Philological Society. At the moment of this writing the remainder of Vol. II. is announced as forthcoming. Thus it seems we are soon to have the dictionary continuous from A to Every, while at the same time Dr. Murray's acquisition of a competent coadjutor justifies us in looking forward to a more rapid progress of the great work.

The new part "contains 6842 main words, 1565 subordinate words, 786 special combinations explained under the main words: total 9193. Of the 6842 main words, 1710, or 25 per cent, are marked as obsolete, and 273, or 4 per cent, as alien or imperfectly naturalized. The portion of the English vocabulary included in this part is remarkable for the extremely small proportion of native English words which it contains, as compared with the large numbers of words adopted from French (many of which are obsolete), and of derivatives from Greek and Latin. A feature of the part that will at once attract attention is the unusual abundance of technical terms belonging to modern science."

We note with interest that Mr. Bradley takes up as a distinct and independent word the verb *to end* in the sense ascribed to it by Dyce in his note on Coriolanus, V. vi. 37, — *holp to reap the fame which he did end all his.* Editors generally interpret the passage, correctly enough, as meaning, — "which he finally succeeded in appropriating wholly to himself"; but do not surmise the possibility of a peculiar technical appropriateness in the word *end.* Dyce found instances in local usage of a verb *to end* meaning to *get in* or *put in;* as into a sack or barn, applied to the housing or getting in of crops of grain. Mr. Bradley accepts the word and suggests as a possible origin for it the verb *to inn*, of which it may be a dialectic variant or corruption. The idea that it may result from such a compound as *in do*, for *do in*, (*Einthun*), as we have *don* and *doff*, for *do on* and *do off*, he rejects. Mr. Bradley sees the same word in L' Allegro, 109, — *His shadowy flail has threshed the corn That ten day-laborers could not end.* Todd, Masson, Browne, and the minor editors of Milton all try to account for this passage by seeing in "*end*" the usual verb meaning to bring to an end, to finish. Even

Mr. Rolfe, who, in annotating Coriolanus, availed himself of Dyce's note, fails, in annotating L' Allegro, to recognize a possible appearance of the same word. Schmidt parenthetically allows that perhaps the Shakespearean word is a dialectic technical phrase of harvest work. Skeat's Etymological Dictionary, Webster's International, and the Century alike refuse the word all acknowledgement. We regard Mr. Bradley as having rescued for us a genuine old word, which was apparently about to be forgotten.

Appleton's School Physics. Embracing the results of the most recent researches in the several departments of Natural Philosophy. By John D. Quackenbos, A. M., M. D., (Literary Editor.) Alfred M. Mayer, Ph. D., Francis E. Nipher, A. M., Silas W. Holman, S. B., Francis B. Crocker, E. M. New York, Cincinnati, Chicago: American Book Company. From the press of D. Appleton & Co.

Composite authorship, even when it presents the most imposing array of names, is not necessarily, or even usually, successful. This book seems to us about as good as a book of this kind can be, and we should not expect to find in the work of the specialists who have here joined their efforts any lack of care or of scientific statement. But it seems to us to present in an exaggerated form the main defects which appear in the best and most nearly satisfactory of the school Physics now in use. That is, it is too voluminous, and undertakes to do too much. The indvidual parts are well done, but they go too much into detail, and we think the book will be found in use to lack unity and coherence. Five hundred and forty pages, many of them in fine print, seem to us too much to set before classes in the ordinary high school and academy for which this book is written.

A Vocabulary to Cæsar's Gallic War, Book II. By George M. Smith, A. M., Principal Canton Union School. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

The plan of this book, as outlined by the author, seems helpful. The many defects, however, in the carrying out of the plan, detract largely from its usefulness, and unavoidably produce a feeling of dissatisfaction. The typography of the book is not attractive, and the proof reading is especially bad. The published list of *errata* includes only a small part of the mistakes which the most hasty reading reveals.

THE following are a few of the testimonials written without solicitation which were received within a week after the issue of Mr. Thurber's *Select Essays of Macaulay*:—

I owe you thanks for the copy of Thurber's "Macaulay" that you were kind enough to send me; truly a beautiful book and wisely edited. Mr. Thurber's Notes are, for their purpose, admirable; I am tempted to say perfect.

The Introduction is just what might be expected of a teacher who makes of literature a well of pleasure and a source of power.

Yours truly,
Syracuse University. CHARLES J. LITTLE.

The Notes are made with consummate skill, to stimulate by helping and to help by stimulating.

Very truly,
South Carolina College, Columbia, S. C. EDWARD S. JOYNES.

The Introduction is excellent, and it strikes a high note in the matter of reading English classics in schools; the Notes if anything surpass the Introduction, in dignity, reserve, and pedagogical sense. The whole thing is a model of intelligence and skill in teaching and in bookmaking.

Yours cordially,
State Normal School, Worcester, Mass. E. H. RUSSELL.

It is pleasant to find one annotated book which permits and encourages some intellectual activity on the part of teachers and pupils. Most things of the kind seem to be intended for imbeciles and to make imbeciles, but Mr. Thurber's suggestions for further reading are very useful.

I am, also, glad to see the good type and paper, and the plain cover, which put the finishing touch of excellence and good taste on the book.

We shall probably use some copies in the near future.

Very truly yours,
State Normal School, Framingham, Mass. ELLEN HYDE.

Ready in October. Select Papers of Addison with Macaulay's Essay on Addison.
Also edited by Mr. Thurber.

REGENTS' SCHOOLS OF NEW YORK.

A partial list of the Authors and their Master-pieces specified in No. 5. (April, 1891) of the

REGENTS' BULLETIN.

(ACADEMIC SYLLABUS)

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The Lives of Daniel Webster: by Henry Cabot Lodge, (In American Statesmen Series, $1.25); and John Lothrop Motley: by Oliver Wendell Holmes, $1.50.

Short Sketches of the Lives and Works of Nathaniel Hawthorne, Henry Wadsworth Longfellow, John Greenleaf Whittier, Oliver Wendell Holmes, James Russell Lowell, Bayard Taylor, Charles Dudley Warner, Edmund Clarence Stedman, Thomas Bailey Aldrich, Harriet Beecher Stowe; (In Riverside Literature Series, No. B., with Portrait of each, paper, 15 cents).

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THE ACADEMY:

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND ACADEMIC DEPARTMENTS

VOL. VI OCTOBER 1891 NO. 7

*THE PREPARATORY WORK IN ENGLISH AS SEEN BY A HARVARD EXAMINER.**

BYRON SATTERLEE HURLBUT, HARVARD UNIVERSITY.

It is rather difficult to criticise generally the entrance examination books in English. Except in one point, we may call them fair in quality. There were, of course, many grammatical errors; these, however, were slips, not positive faults. They occurred when a writer lost control of a long or an involved sentence. As a rule, a mistake in one sentence was not repeated in other sentences. Many of the books were full of Latin constructions, but the teachers of Latin, it seems to me, deserve more censure for this than the teachers of English. Aside from this distinct fault the sentences were, on the whole, fairly well constructed.

In regard to paragraphs and punctuation, the men seemed more uncertain. Most had good intentions, but that was all. A few thought that each sentence should constitute a paragraph; more, that there should be no paragraphs at all. The latter, however, were men whose work showed traces of haste and carelessness. Were I to grade the class, I should say Paragraphs, *C*—, Punctuation, *D low.* Few men knew that there were marks of punctuation other than commas, which they scattered about in rather hap-hazard fashion, and periods.

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*This extract is from a letter written to Professor Briggs by Mr. Hurlbut who read the books in English written by the candidates for admission to Harvard in June, 1891. For obvious reasons it suppresses the names of schools which are mentioned by Mr. Hurlbut as presenting special excellence in English work.

The compositions were, on the whole, well proportioned; there was very little unfinished work. The writers showed intelligent appreciation of the points of the stories and considerable skill in selecting and managing incidents; not many spoiled their work by trying to crowd in all the details they could remember.

The great fault of the themes as a whole, was the failure to appreciate the value, the fitness, of words. There was a strong tendency to "echo" stereotyped newspaper phrases, words of the author that had caught the eye, and fine terms that lingered in the memory. These the writers introduced without thought of the fitness of the phrase, and the result was most inharmonious. There was lack of simplicity, of naturalness, of ease and grace of expression. The boys had no feeling of ownership in the words; they were trying to write good — proper, in a narrow, prim sense is a more suitable word — English and they were very conscious of the effort. In all the books, except those that came from —— and ——, this fault was noticeable.

The two schools I have just named sent the best books. The average mark of the —— books was, I think, higher than that of the —— books, but the former school sent only six men. The men from —— wrote with more freedom, with less conscious effort, than any others. I could, of course, form no opinion of the Boston schools, for the books of their candidates were scattered among the Cambridge books; consequently they were not read at one time. The best book was written by a man who took the examination in Cambridge. It seems to me that —— and —— attain most nearly the end we desire to reach in teaching English, — to enable the student to clearly and easily express his ideas in simple, idiomatic English.

In making up the mark of a candidate, we counted the theme for two-thirds of the whole, the correction of the sentences for one-third. As a rule, a man who received a high mark (6 1-2 or 7) on his theme brought down his average *slightly* by the mark on his sentences; men in the middle rank (4 1-2 to 6) raised their averages a little or received about the mark of the theme; men in low rank (3 to 4 1-2) raised their averages. Many were "pulled through" by the correction of sentences. Men who "failed badly" in their compositions were equally poor in the correction of sentences. On the whole, the marks on the sentences were higher than those on the themes, — to estimate roughly I should say 5 1-2 to 4. Here again —— and —— came to the front. The average of both schools must have been very high.

Many of the men were very heedless in correcting the sentences. It was amusing to note how many in correcting the third sentence made the mistake which they corrected in the fourth. They had knowledge but they could not apply it. Few, save the —— men thought that there was anything wrong with "quite" in the eleventh; in the tenth very few corrected "Mr. Thomas'"; not many saw the misuse of "usurped" in the second; the other sentences were fairly well corrected.

In a word, the boys seem to understand the principles of composition fairly well: they have learned rules but they cannot apply them; their work lacks simplicity, naturalness, and ease,— qualities which practice alone can give.

THE above review, by the examiner himself, of the English papers written at the examination last June by candidates for admission to Harvard college, suggests a possible better utilization of examinations by supervisory boards in general.

The teacher who examines his own class does it from a motive of curiosity: he is anxious to see if his teaching has been effective, if his pupils know what they ought to know. He reads the papers as a matter of course. If he had not been going to read the papers, he would not have set the questions. He would have deemed the hour wasted that his class had consumed in writing papers that were destined to be thrown away, or stored up unread in bundles in the school closets. He would as soon think of asking a question orally and then turning away without caring to hear the answer as of asking a question in writing and then ignoring, or filing away unseen, the answer that was given in writing. A healthy professional spirit in a corps of teachers condemns as dishonest the practice of giving a class an exercise to write merely to occupy the time while the teacher attends to a visitor, unless the purpose is fully held to scrutinize the papers and to deduce from them results that shall bear upon the business of instruction. Pupils come sooner or later to know whether their work is to be examined or not. If they have learned that they may transgress with impunity, even the best of them will cease to take pains to do their best, while the worst will fall into extremes of wanton slovenliness. Pupils have even been known to write down insolence and ribaldry in so-called examinations, confiding in their papers as perfect hiding-places for their adventurous silliness; and a teacher who would be shocked to overhear coarseness of speech or to detect turpitude in clandestine notes, has been known carefully to gather up just such shocking things and to lock them up securely in his drawer, always to remain blissfully unconscious of what he has got.

An examination is a serious affair. As concerning the teacher and his pupils, it implies, on the one hand, a serious purpose to ascertain something, and on the other a serious effort to exhibit something. Each party to the undertaking has a responsibility. Neglected or allowed to become merely perfunctory, examinations grow ridiculous and obnoxious to the carping of discerning critics. This is, in fact, what usually happens to them even when they originate in the school room and concern only the two parties, — the teacher and the taught.

In existing school systems, however, a third party comes in to complicate relations a little and to suggest other considerations. A supervising body, external to the schools and superior to the teachers, finds examinations a means of carrying on its supervision. The situation now implies curiosity on the part of the supervisors, partly, perhaps, as to the way in which the pupils have done their work, but principally as to the way in which the teachers have done theirs. The examination now issues from the supervisors. They make the questions, and simply employ the mediation of the teachers in organizing and caring for the externals of the examination-ceremonial and in making a preliminary survey of the resulting papers. The motive, the mainspring, the justification of the supervisors' examination is the satisfaction of the supervisors' curiosity as to the way in which the school work is done. If they have no such curiosity, — as may well be the case, for they have been spending the whole school year in inspection, — then they alone can tell why they keep up the empty forms, so burdensome and exhausting in the June heats and in the weariness of the end of the year.

It is fair to assume that the actual state of things in the matter is the ideal one, and that the supervisors really desire knowledge as to how teachers and pupils have done their work. As the written papers, after a cursory examination by the teachers, go at once into the possession of the supervisors, and remain there, it is fair to assume that this body avails itself of its opportunity to acquire the desired knowledge. Now this knowledge cannot possibly be surmised, by any one who does not possess it, as being other than extremely interesting and important. If the motive of the supervisors in giving the examinations was curiosity to learn how teachers have done their work, then the teachers themselves may reasonably be credited with curiosity to learn how their work appears to the critical eye of the supervisors.

Here appears an evident failure of the parts of the system to work together in harmony. As pupils have a right, when they have submitted work for inspection, to know how well they did it, what faults they have committed and in future must guard against, so teachers, whose work has been put under the eyes of duly appointed and responsible inspectors, have, in some sort, a right to hear from it, and to learn in what respects they must proportion their efforts in new ways and what new aims they must adopt.

A central body whose function is observation and criticism, and which has been formally clothed with the necessary authority, has an immense opportunity of useful activity in collecting and coördinating data and in deducing from such data valuable general principles. A Harvard examiner, like Mr. Hurlbut, knows more about the teaching, in any given line, that is done in the preparatory schools, than any teacher can know. The teacher cannot possibly know the work of other teachers besides himself: even his own work he cannot view from without, as he needs to do from time to time in order to see it as a whole and to know it as it really is. Hence the college examiner is in a position to become exceedingly useful to the many teachers whose results he so carefully tests. Could the custom become established that the readers of the books of candidates should report on them to the teaching public of the preparatory schools, a great gain for the practical work of these schools, — and, in fact, for all secondary schools, — would manifestly be achieved.

So the Boston supervisors are in precisely the situation that qualifies them to render untold service to the teachers of whose work they are the responsible inspectors and guardians. In respect to the secondary schools, for example, that are under their care, they alone are in a position to have a conspectus of several different schools of the same rank, working on the same course of study; and they alone can communicate to the teachers of all these schools the happy devices and the fresh methods that originate in any one of them. They alone read the papers of the pupils of many teachers, and know what results appear in these papers that can be ascribed to personal differences in instructors. They alone can correlate the various studies and detect the influence attributable, in the sum total of a pupil's attainments, to one or another study for which a given teacher or a given school may have a special zeal. They alone can compare, on an adequate scale, the English writing of pupils who have studied Latin with the English writing of pupils who have studied French or German. They alone, by proper massing and tabulating of results, can compare the work of one year with that of another, and so detect tendencies that may need to be checked or else viewed with favor. They alone, as constant visitors in the schools, have an opportunity to note the diverse procedures of diverse minds, and hence they alone can devise pertinent questions, skilfully directed to elicit the most interesting and useful information. They alone can plan examinations in many studies at once without presupposing undue knowledge in any one; as, for example, they alone can draw up questions in English without presuming on too much familiarity with Latin or French.

The surpervisors have a post of untold importance for the promotion of a scientific study of pedagogy. It is true they are immersed in details: but they have the details, and it is with details that all science begins. Their function should be to mediate between pure science and the hard workers with fixed hours and crowding tasks. In short, as they are to the teaching body an eye to inspect and an ear to listen, so they should be to it a tongue to speak.

We have especially in mind, at the present moment, the examination papers which are annually sent to the supervisors of every large city, and of which it has been the all but unvarying lot of the teachers never afterward to hear anything more at all. Pupils thus dealt with by their teachers soon cease to care about doing well. Teachers thus dealt with by their superiors will not prove to be exempt from the common infirmities of human nature. Just in proportion to his earnestness in his work, a teacher is inquisitive to hear his work characterized by those who can view it and summarize it as a part of a great whole. Just in proportion to his *esprit du corps* a teacher is inquisitive to know the aims and methods, the ambitions and the achievements, of the other members of his corps. The teacher should send up his stack of papers with infinite expectation.

To anticipate such a state of mind as destined to take possession of him at the end of the year would add vigor and point to his year's work, and surely would give zest and interest to a process that most emphatically needs it, — his own reading of his papers before sending them up for review.

ON THE STUDY OF MACAULAY IN SECONDARY SCHOOLS.[*]

SAMUEL THURBER.

To be perfectly adapted for reading and study in the class-room, a selection from our literature must meet these conditions: it must be interesting, both in matter and in manner, to the young persons for whom it is intended; it must have a genuinely important content, that is, its subject must be worthy of serious attention and must promise a substantial gain in knowledge; it must be a masterpiece of English, a model of clearness, simplicity, and vigor.

The literary essays of Macaulay not only fulfil these conditions, but they offer other advantages for school-room study which render them, for a certain stage of the high-school course, perhaps the most eligible prose writings in our literature. Macaulay's reading had been wonderfully comprehensive, and his memory retained the results of this reading in a manner unexampled among modern writers. Hence he illustrates his meaning, as he develops his subject, with constant allusion and citation, challenging his reader with comparisons, and never suffering him to relax his attention. His paragraphs are full of names or of suggestions of names. He assumes that his reader has the same acquaintance with the older literature as himself. To catch instantly the entire pertinency and appositeness of every allusion of this writer would require that the reader should himself be endowed with equal gifts and possessed of

[*] From the Introduction to *Select Essays of Macaulay*, (Milton, Bunyan, Johnson, Goldsmith, Madame D' Arblay), edited by Samuel Thurber. Boston: Allyn & Bacon.

equal stores. The reader of Macaulay must often stop and think; he must summon up all his historical and literary memories; often he must inaugurate fresh reading under the stimulus of an off-hand citation that evidently was deemed by the author to throw a flood of light on the subject in hand.

While, therefore, many writers are interesting in their several ways, Macaulay's way lies peculiarly in the direction of provocation to further examination both of his main topics and of his incidental references. An interested reader always reads concentrically; that is, with some nucleus about which books and authors group themselves with more or less mutual relation. Such a centre is sure to be found in one or another essay of Macaulay. Each essay requires at once certain further research. The other essays are soon found to help wonderfully towards the understanding of the one first read. This reading must be done with pencil in hand. The reader's own notes thus become his all-sufficient guide in choosing his next books. Thus reading becomes organic, having a principle of structure, a clear aim and purpose, instead of being amorphous, with here a book and there a book picked up by chance or at the advice of another person. For example, the essays of Macaulay touching eighteenth-century themes suggest an immense range of possible reading of a most interesting character. The stimulus which these essays give to such reading is far more potent than the pages of histories of literature could be, for the reason that in the essays we see and feel the effects of reading upon the culture and the power of a writer, while the histories give us only external facts. The young reader is apt to ask for a list of books to read, and the old adviser is often too willing to accede to the request. But prearranged lists of books are fatal to inner, spontaneous interest. No one reads through a list except under duress. Not a list of items to be checked off, but a centre, a starting-point, is the true gift of the school-room Mentor to his learners. The lines of progress that radiate from a good centre are infinite both in their number and in their extent. All good reading is gradually included within their reach. The atoms of acquisition come in this way to cohere and to take shape in well-rounded culture.

For yet another reason Macaulay is a writer peculiarly stimulating to youth: he is himself always a youth in the fervor and the intensity of his sympathies. What he admires he admires extremely, and what he hates he hates with most cordial hatred. It is usual to say that he goes too far, and praises too highly, or depreciates more than is fair. It is plain, however, that, were Macaulay's feelings less ardently enlisted in his expositions, these expositions would tend to approach the commonplace, and would never have become the power in literature that they are. It is impossible to conceive an earnest and moving piece of writing whose chief concern should be to balance praise and blame, and show up merits and demerits in equal measure. Macaulay's function in literature was not cold criticism. He was far removed from indifference towards the persons and the things he describes. His service was to arouse in English readers an interest in the great events of their history and their literature. He is the most popular of writers. Nor will it be said that his judgments, though often expressed in strong language, are wrong and perverted judgments. For youthful readers he may be accepted as a safe guide. His exaggerated expressions are never intended to conceal insufficiency of knowledge. He never indulges in mere conventional phrasing, the besetting sin of young and ambitious writers. He is absolutely sincere and original. Familiarity with such a writer during the period of life when habits are forming must be altogether wholesome.

The English teacher will naturally find an advantage in reading with his class selections that discuss his own especial theme. As lessons in literary history, as well as lessons in English composition, these studies will be fruitful and memorable. In connection with the incidental researches which they suggest, they will constitute an opportunity for the acquisition of knowledge, and for the general discipline of the taste that, from the pedagogic point of view, lacks absolutely no element of desirableness.

Such reading must be done as work, not as mere amusement. The pencil must be kept in constant use, and the note-book must be always at hand. The student must be his own annotator. No more in reading a piece of English than in working out an algebra lesson should the learner expect to have his work done for him. Only what he earns will he ever possess, though what he borrows from another, or has given him, may meet the requirements of an examination.

No pedagogic maxim can be adduced that shall favor giving the learner results without leading him through the processes through which the results were obtained. Results without research are dead and useless. Research without results is excellent and vital, because always accompanied with hope. Notes are usually a mere incubus upon interest. They put an obstacle in the way of the teacher, who would like to exercise his skill by leading his pupils through the various stages of growing curiosity and zealous search up to the consummation of successful finding. Those editors who steal from the teacher his opportunity of teaching are really his worst foes. Strange ideas of the pedagogic province seem to be held by annotators who try to tell the pupil everything, as if all the teacher had to do was to ask questions and get things told again, — *re-cited*.

As there is appended to the present selection of the essays of Macaulay a body of "notes," the annotator desires to explain exactly what grounds these notes cover, and for what purpose they were prepared. In nearly every case where a note appears, it will be found to ask a question or to suggest a bit of research, with a hint as to the direction in which the research must be made. In no instance is a note given where the needed investigation is obvious and can be readily planned. That any notes at all of this kind are given is hereby confessed to be, so far forth, a trenching on the proper field of the teacher, whose duty it is to prescribe tasks and furnish the needful helps for their performance; and the annotator accordingly offers his apologies to those teachers who find his suggestions superfluous, and he would rejoice to be able to think that all teachers belonged to this class. On the proper field of the pupil, however, he has not trenched. If, like a visitor to the class-room, he has asked a few questions that the teacher would soon have asked himself, he has not thwarted the teacher by whispering to the pupil his answers. The great bulk of the annotable matter has been left without annotation, in order that the activity of the student may find free play. Only where the possibility or the desirableness of incidental reading has been somewhat less obvious, has any question been asked, and only when the books to be consulted have been such as would not instantly suggest themselves, have hints been given as to what to read.

Occasionally the needed research has been a little troublesome to make. In a few such cases results have been given, in view of the fact that the book is destined for use by young persons whose time is limited, and that investigable matter, in any Macaulay text, is already superabundant. The annotator believes that he has omitted no difficult point. Allusions not noted he has thought fairly within the reach of high-school classes. A considerable portion of the entire mass of the notes is occupied by quotations of interesting relevant passages that should be read in connection with the text.

It sometimes happens that Macaulay names an obscure and unimportant person with some epithet, or in connection with a context, that sufficiently explains this person's appearance, so that any note at all becomes needless. It is by no means always necessary to run to the biographical dictionaries when a name appears. Sometimes investigation will reveal only so much as the author himself tells in a word or two, and to find even this will cost time. If Macaulay says a writer is worthless, it is no increase of knowledge to find in what year such writer wrote his worthless book. Discrimination is necessary in reading pieces so overcharged with allusion. It is only the ancient classics whose every word is precious. The reader of English must reach the end of the chapter. Infinite other chapters await his eager attention. Hence the English reader must learn to recognize and set aside what is unimportant. Even the unimportant things will gradually gain significance as the reader's acquaintance with literature extends, and the young reader must not at the outset be too much loaded with erudition whose relation to what he is studying he cannot appreciate.

But by far the greater portion of Macaulay's allusions must be worked out with whatever labor of research is necessary to make them yield their meaning. This labor constitutes the *getting of the lesson*. A lesson in English literature should be got by a method analogous to that which, in the physical sciences, has already come fully into vogue, and is sometimes called the laboratory method. In physics it is no longer customary to let a student merely read a formula and witness an experiment. He must himself conduct the experiment, observe the phenomena, and deduce and formulate the law. In literature the entire mass of phenomena lies concealed in books. The art of research is here the art of using libraries. A beginner is bewildered as he confronts a large library. Gradually he acquires skill and begins to find things with ease. The labor of this search is pleasant, and the successes give it zest, while the tantalizing failures pique and stimulate perseverance. The study of history, which the learner is carrying on at the same time with his English, is also a library study, and the same familiarity with books which he gains in the one helps him in the other. Thus these studies are manifestly such as cannot be carried on while the student sits motionless at a desk and pores over a single book. The method of explanatory notes presupposes a dead learning-by-heart, with the young people sitting in straight lines, their eyes fixed on their lessons, their thoughts bent on committing these lessons to memory. The library method assumes a collection of books and such freedom of movement as choice and consultation of them necessarily imply. It assumes, moreover, pleasant and free relations with the larger libraries outside the school-room that all American communities are rapidly coming to possess.

The writer has had in view schools of secondary grade; that is, high schools and academies. He has taken for granted that such schools have collections of books, just as, if he were preparing a text-book of physics, he would take for granted the presence in the schools of proper laboratories. There is no such thing as reading one book without the help of other books. There must be perpetual reference from book to book. This is the case even in easy reading. In reading that is perpetually setting tasks of elucidation and verification the presence of a good reference library becomes an absolute necessity. The best dictionaries, the best encyclopædias, the standard histories and biographies, complete editions of the prinpal authors, must be always within reach of the student. It is not the business of a pedagogic editor to dispense readers from the necessity of procuring the means of research. Rather is it his province to show readers how to conduct research and what apparatus of research is most serviceable.

The custom, prevalent in the schools, of dwelling a long time on small portions of Latin and Greek text must not be allowed to establish itself in the English work also. An English piece must be read and got through with. If we adopt Professor March's method of exhaustive questioning, we shall never arrive at any goal and shall never make English interesting. Work in English should be vigorous and rapid, taking many things for granted. The skilful teacher surmises when his pupils fail to understand a point rightly, and halts the column of march only on such occasions. That the reading may go off smoothly and intelligently, due preparation should be made. The teacher should look over a few pages in advance and note the points at which special difficulties of any kind will arise. These points, as they require more elaborate investigation, he will separate from the text when he assigns the lesson, and he will exempt the class *en masse* from giving them attention. The text, thus temporarily cleared of the chief difficulties, is prescribed to all the class, who must work it out and be prepared on it at the next lesson. At the same time the special points of difficulty are dealt out to individuals, one to each, to be looked up and reported on. The interest of a class exercise is much enhanced if the individual pupils bring different contributions, so that each is listened to with curiosity on a fresh topic. Moreover, if all alike are required to make the same investigations, the reference books may not suffice to go round. All the obscure points are reported on, and all the pupils get the benefit of the explanation. Each pupil has had as much research to make as he had time and opportunity for, and the class can at once pass on to fresh woods and pastures new. In this way it is legitimately feasible to cover considerable ground in the class reading of English texts while pursuing strictly the method of research.

The points of special difficulty may well be looked up a few days in advance of the time when the class is to read as a lesson the passages where they occur, and these may in some cases be given to pupils as themes, which must be punctually written out, ready for reading at the precise moment when, being needed as elucidations, they will be appreciated and will be listened to with attention. The pupil who has such a theme to prepare will ordinarily need assistance in making his researches. To give this assistance is the teacher's business. The teacher must, accordingly, be prepared, when he assigns such a theme to a pupil, to say where the desired matter can be found. He must know whether the books that will have to be used are in the school library or must be looked for in the public library of the town. If the books are absolutely inaccessible to the pupils, the themes whose elaboration depends on these books must not be given out at all. In such case it is the teacher's privilege to present as a downright gift the matter which, in better circumstances, it would be more proper to let the pupils work for and earn the right to possess.

The school should prepare for life, and not for examinations. The memorizing method, the cram method, the note method, is good only for examinations. The English that pupils are destined to read for their entertainment and culture as mature men and women will not be annotated. It is right to keep in view the conditions that will actually exist. The habit of depending on notes is enfeebling. Books in the ancient languages are always read with the help of notes, and books in the ancient languages have accordingly ceased to be read except by a caste of special devotees whose work in life continues to have some relation to the pedagogic function. But all men and women read English books. To read English books with intelligence, the habit of consulting the various collateral helps, of drawing upon the stores of related knowledge, is of all importance. It is doubtless a trouble and annoyance to use the dictionary. But only by using the dictionary can one attain to a command of the English language. He who cannot bring himself often to turn aside from the book he holds in his hand to the other books on his shelves finds himself limited in his reading to the weakest and shallowest books of the day. He can read no history, no biography, no travels; he can read nothing whatever that is old, nothing that was produced from the stores of large and generously equipped minds, nothing that reflects the life and manners of its generation, nothing that employs a vocabulary richer and more varied than that which serves the petty uses of every day.

Some of the books of reference which a high-school library should contain for the use of its English classes are the following;—

Webster's International Dictionary. Among other useful things, the new International contains a revised edition of Wheeler's Dictionary of the Noted Names of Fiction.

A good encyclopædia. The Britannica is not too large. Even the best will often be found to give no help.

Adams's Dictionary of English Literature.

Brewer's Reader's Handbook of Allusions, References, Plots, and Stories.

Brewer's Dictionary of Phrase and Fable, giving the derivation, source, or origin of common phrases, allusions, and words that have a tale to tell.

Taine's English Literature.

Cruden's Concordance to the English Bible.

Scoones's Four Centuries of English Letters.

Macaulay's Works, entire.

Knight's Popular History of England.

Ploetz's Epitome of Universal History.

Hare's Walks In London.

Baedeker's London.

Ryland's Chronological Outlines of English Literature.

The books here named are given as specimens of reference books proper. Their number could be increased to any extent desirable. But reference will almost as often be fruitfully made to books that do not come under this denomination. Good editions should be procured, as fast as the means of the school allow, of the chief English writers. It is almost daily the case that an obscure point in the selection that is being studied can be explained by reference to some other work of the same writer. This often happens to readers of Macaulay. In works of history, moreover, the library cannot be too well stocked. Both the classes in history and those in English will find great furtherance in an abundance of the standard works of history.

SOME PROBLEMS OF PEDAGOGY.

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We are coming to recognize the importance of pedagogy as a science. We find that it has a place in the scheme of university education, and that it should form part of the equipment of the elementary teacher. Except in the case of a few thinkers who believe that unvarying laws of method can be founded upon unchanging principles of psychology, it is generally agreed that pedagogy is not an exact science, but that most of its precepts are founded upon tendencies which are only approximately true, and not upon unvarying principles of human nature. Its subject matter, like that of psychology, is the human mind. But it deals with mind in the concrete, it cares nothing for laws or principles which state abstract truths, unless these can be reduced to practical precepts capable of particular application.

The many books and articles recently published upon psychology as applied to education, upon the principles of method, and upon the various theoretical and practical problems of pedagogy, show how general is the interest in all that concerns educational science. The freshness with which many of the questions can be discussed and the new points of view from which they can be considered have no doubt stimulated many writers upon education to an over-positiveness of statement and an over-valuation of their own thought. The temptation is very great to be the first to lay down a new theory as an established principle of education; and principles which could only be verified by long and careful observation and experiment are sometimes deduced as established truths from very hasty observations.

This habit of hasty generalization has a tendency to obscure the importance of the real problems of pedagogy which call for long observation and an accurate registering and comparison of the results obtained under different conditions. The first step in the solution of a problem is to state it carefully; and it may be worth while to call attention to a few of the questions which are yet by no means well decided, and upon which at some time, educators ought to have a reasonable agreement of opinion.

The question of heredity is, perhaps, the most important in the whole field of education. The teacher finds himself confronted at every turn with inherent dispositions, capacities, and tendencies which seriously modify and hinder his work. The natural endowment with which a pupil begins his school life is an influence of the greatest importance in determining what the teacher can do for him. This hereditary influence is clearly recognized by all writers upon pedagogy, but the extent to which it can be modified by very early training has not yet been carefully investigated. In the first years of a child's life, before he begins school at all, he acquires more knowledge than in any equal period afterwards. This period is a part of his education, and though the teacher may not be directly responsible for it, it is important for him to know the relation which it bears to his own work. It is unquestionably true that certain powers, tendencies, and dispositions are born in children and can be modified only a little by after education. But just as we notice that plants are often distorted, stunted, or stimulated by influences which affect their early growth, so it is probable that influences which affect a child when its earliest conscious life is awakening give a set and direction to its powers which after training cannot overcome. An experienced nurse talking about crying children said: "None of the babies I have charge of are ill-natured, I never have any crying babies." She had learned the art of so dealing with infants as to affect their early dispositions if not their characters.

It is fashionable in pedagogy just now to study the vocabulary and the knowledge with which young pupils commence school; but there has not yet been much done in studying the way in which their characters and dispositions can be moulded by very early influences. The greatest problem of pedagogy is to determine how much of what we call inheritance is due to the way in which children are handled and taught, and to the influences which surround them from birth to the time that their school life begins. It is very improbable that the answer would be the same for different children, or that we shall ever be able to give a definite statement of what is due to inheritance and what to the proper training of infancy and early childhood. But it seems reasonable to suppose that long and careful observation and experiment will give us at least a fair notion of the relative value of these two influences in determining the character of a child when it commences school. Most reasoning upon child nature has been invalidated by drawing from a few cases conclusions which failed of a wider application. It is very doubtful if an answer of any value whatever to this problem could be obtained by the efforts of a few investigators. But there ought to be a wide recognition of its importance and a constantly increasing collection of accurately observed experience gathered for its solution. Perhaps, if many educators labored diligently in this direction, it would not be long before parents could be held to a greater responsibility for the characters of their children.

The time at which the regular school life of children should begin is by no means so well settled a question as one would think from its importance. The time at which children are admitted to the public schools seems to have been determined by practical disciplinary reasons rather than from any established educational principles. The fact seems to be that the proper time for beginning the formal work of education depends upon certain conditions of mental development in the pupil and cannot well be determined by a definite rule. Some pupils gain in mental ripeness so much by being left to the developing influence of the sports of childhood that they make better progress by beginning their school life comparatively late. Others need time to assimilate school instruction ; they require to have new facts and new ideas slowly worked into them. These do better to commence their school work earlier ; they cannot make up for lost time by the more rapid progress which better developed faculties will give them. Persons who reason from one class of pupils come to very different conclusions from those whose experience lies mainly with the other. Yet a careful collection and comparison of instances ought to help us to a better understanding of the principles which should govern a decision.

Since the wonderful success of the training of John Stuart Mill, it has been a question with thoughtful educators whether the best results can be obtained by educating pupils separately or together. There is no doubt that the labor of the teacher can be applied most economically in the case of a single pupil. There is no delay needed to adapt the instruction to the different mental capacities and the different types of mind sure to be found in every class. The teacher can study the pupil directly, learn his mental aptitudes and weaknesses, and work in the best way for the single result desired. On the other hand, the aim of the teacher is not simply to impart knowledge, it is to fit the pupil mentally for the work of life. This work is in most cases to be done among his fellow men, and it is fairly argued that a training among his fellows is the best way to fit him for the contests and associations of life. With the majority of pupils financial considerations must always compel associated education. But the parent who is able and desires to secure the best possible education for his child cannot find among educators any agreement as to what in a majority of cases would be the best system. He can find plenty of individual opinions, usually very emphatic when founded upon little knowledge, but no reasonable judgment of scientific pedagogy.

Another pedagogical question of importance is the relative value of the different subjects of study. This grows more complex and difficult of solution the higher we ascend in the educational scale. But it is not well settled even in the case of the common and elementary studies. The claims of various subjects to a place which they do not now have in the curriculum are pressed with much vigor. There is not a good agreement in the present courses of various schools, so that a pupil often finds himself embarrassed in going from one school to another. It could hardly be claimed that any selection of subjects would be best for all pupils, but what will on the average give the best results is surely capable of being determined. There is a large amount of discussion upon the subject, in which disputants reason from universal premises, which they themselves lay down, to particular conclusions which they desire to reach; but there is little of that long and careful collection of instances and comparison of the results of various experiments to which we must look for any just conclusions.

Connected with this is the question, how our courses can be filled and our work arranged so as to prevent as far as possible all waste of educational effort. There are great sources of educational waste in the conditions under which our schools labor, in the kinds of pupils who must be educated together, and in the character and circumstances of our teachers. But the question, how under existing circumstances our school programmes can be shortened and enriched, though much discussed, has not been investigated in that spirit of scientific pedagogy which promises any valuable results. To criticise existing plans and methods from the standpoint of preconceived notions may help by the friction of opinion to call attention to the subject, but it cannot be expected to do anything towards the solution of the problem. How important the time element is in the education of a child is surely one of the great questions of modern pedagogy.

Considering the place of the high school in our scheme of education, it is important that we come to understand what kind of high school instruction and what kind of high school courses are, on the whole, best adapted to fit pupils for American life. We recognize the fact that the high school is a fitting school for life and not primarily a fitting school for college. Some of our colleges are slowly coming to understand this; they are making concessions in their requirements for admission to the work of the schools by substituting studies which seem necessary, for others which the schools can better dispense with. This, however, has been done so grudgingly and with so little study of, or regard for, the work of the secondary schools, that the proper coördination of the university and the high school, as the latter is compelled to be by the pressing influences of modern life, has become one of the important questions of modern education.

It is a difficult matter to select the subjects which it is best to teach in the secondary schools. The relative disciplinary and culture value of the subjects of high school grade is certainly not well determined. A few thinkers have endeavored to decide upon the relative value of certain studies, but the personal equation has entered too prominently into their observations for their conclusions to have much value. To reason as to what knowledge is of most worth after the manner of Herbert Spencer would lead to a great variety of results according to the bias of the reasoners. The strongest argument against the validity of Mr. Spencer's reasoning is the fact that the method of education which he recommends, as far as his special precepts have been followed, does not produce any better results than, if indeed as good as, methods which he condemns. The determination, as far as it can be done, of the relative value of the subjects taught in the secondary schools is a matter of great importance to college faculties, for much of the question of coördination depends upon how far the studies which from the nature of the case are best for the secondary schools are best for those special pupils who are to pursue their studies further in college. It does not seem that college faculties have devoted much careful investigation to determining whether the subjects which they require for admission are, from a pedagogical standpoint, the best preparation that may reasonably be asked for the general pursuit of higher studies.

This list of pedagogical questions might be very largely extended, but my aim is simply to emphasize the need of considering such questions in a scientific spirit. It is the lack of the scientific spirit which has rendered so much of our pedagogical discussion unfruitful. There has been a much greater reliance upon the deductive method than the conditions of the subject would justify. The number of general principles from which valuable conclusions can legitimately be deduced is much smaller than most of our writers upon education are willing to acknowledge. Since there is at present much interest in the study of psychology as a branch of educational science, it might be well to call attention to the fact that to determine what principles of psychology have a real, practical value for the teacher is one of the problems of modern pedagogy. The inductive method is slower and yields less brilliant results to the individual investigator, but it offers the only satisfactory solution of most of the important questions.

It is surprising that so little has been done in interpreting the experience which we have at our command. Our so-called histories of education are largely made up of a recital of the opinions of educational thinkers at different periods. They do not tell us what the real teachers aimed at, what were the means they used, and what were the results achieved. The effect of the education upon the culture and power of thought of those who were educated is, from a pedagogical point of view, the important question. I wonder that so little attention has been paid to a critical study of the education of the last generation. A careful analysis of what our fathers attempted, and of the results in character, knowledge and culture which they obtained, would be of great service in helping us to determine the relative value of studies and methods.

The weakness of many teachers as students of practical pedagogy is their inability to interpret their own experience. It is by no means easy for a teacher to review his experience with judgment and candor; it requires a sanity of mind and a putting aside of feeling and prejudice which are not natural to the average man. The range also of one's own experience is narrow, and there is danger in drawing inductions of wide application from a few instances. Teachers have often laid down as established maxims of education expedients which have worked well with them in particular circumstances. But the fruit of experience is wisdom; and the professional teacher, if he is wise, will have drawn out in his own mind the lessons which his experience has thus far taught him, holding himself ready to revise them by the light which his own further work or that of others may give him. In the experience of almost every teacher, if it is rightly interpreted, is a contribution towards the solution of some of the problems of pedagogy.

THE MARKING SYSTEM.

F. G. IRELAND, NEW YORK.

A BRILLANT teacher of my acquaintance, when she is asked by possible and inquiring patrons whether she is in the habit of marking her boys on their daily recitations, gives this answer: "No, I cannot spend my time in marking them; I need it all for teaching." Certainly, if the question of marking is considered merely from the point of view of the immediate convenience of the teacher, it must be admitted, at least, that it does take a great amount of time. I shall try, further on, to show that my objections to the marking system have a firmer basis on which to stand than the consumption of the teacher's time involved, or the waste of his convenience. But, for the present, it may fairly be said that the multiplicity of duties which the modern ideas of secondary education impose upon the teacher, the vast number of conflicting forces which he has, in some way or other, to reconcile or to attempt to bring so far into reconciliation as to render his daily work possible, the ever-existent antagonism between the demands of the colleges on one hand, of the parents on another, and perhaps of his own convictions on another — all these render any device for simplifying or abridging his routine work extremely desirable, so long as that device does not involve a sacrifice of principle, by which of course is to be understood a sacrifice of any really essential matter.

It has not seemed worth while to attempt a computation of the time necessarily consumed in marking pupils at the end of each recitation, and, by the familiar methods of statisticians, of showing in an astounding total how much time is thus abstracted from the time supposed to be devoted to instruction. Statistics are quite as apt, if not to mislead, at least to bewilder, as to instruct; and in any case, like edge-tools, they should be handled by experts, lest we should cut our own fingers instead of disabling our antagonists. But it is worth while to call attention to the delicate weighing of nice points, the careful consideration as to whether Jones really answered that question eight-tenths' worth or only seven-tenths' worth, the nice balancing as to whether Smith's faltering answer of a difficult question was worth more or less than Robinson's ready answer of an easy one, and surely no more need be said to show that a conscientious adoption of the marking system involves a vastly greater amount of time and of worry than is meant in the mere putting down of marks. A conscientious use of the marking system demands a great expenditure of time and of nervous force on the teacher's part; and both of these should be saved him unless at the expense of some of those vital objects to which he has consecrated all his time and all his force. But unless conscientiously used, the marking system is a mere refuge; a resource for the indolent, a sop to conscience. And with the best intentions in the world marking inevitably tends to become mechanical.

One other point as to the matter of time and convenience — and by convenience I mean what *for* "convenience" I have attempted to abridge into one word, the saving of the expenditure of mental energy, of nervous force, of personal influence and inspiration, all of which, surely, teachers need to save like misers in one direction, that they may pour it out like spendthrifts in others.

For six years I was a subordinate teacher in private schools. A part of my duty consisted, not in teaching, for my capacity in which, rightly or wrongly, I was engaged, but in making up reports at the end of each school week. I will not claim that, after the week's marks were in, this involved much mental strain; it was chiefly a question of penmanship and arithmetic — two subjects, by the way, which I never engaged to teach. But I do not think that I ever rose from the putting down of those reports, without a feeling that I had expended so much futile labor. The reports were, at the best, but roughly just, and in more cases were roughly unjust. At that time, I never questioned the propriety of the system. Subordinate teachers may be allowed to eschew broad general questions of education. It seemed as much a part of the general working of the universe as recitations or the luncheon hour; but I always chafed, in the first place, at being obliged to do it, and in the second place at its being done so ill. That it was done ill, I then attributed to individual weaknesses; I now attribute it to a more general and far reaching cause.

For two or three years after I opened a class on my own account, the force of tradition or of habit induced me to keep up the old kind of school report with weekly returns and averages and all the rest of the machinery. I had never done so in all my experience with private pupils, and I do not yet know exactly by what mental process I evolved a distinction between a recitation by one pupil and a class which in its entirety for two years did not consist of more than eight at a time, and in which there was no recitation where the whole eight were engaged. I remember wondering a little at the peculiarities of a system which involved in the same scale a boy of eighteen in his last year of preparation for college, and a boy of eight in his last years of babyhood. But the first years of one's independent teaching bring many wonders to sight, and this was not by any means the greatest of them.

Finally I resolved to emancipate myself. I gave up giving marks, I gave up sending weekly reports, and I have never regretted my decision.

There are objections to the marking system besides those already indicated; objections in the abstract, and not complicated with personal considerations.

The first to be mentioned is that it appeals to a low motive. The fear of punishment and the hope of reward have furnished for many ages subject for debating clubs if not for debating theologies. In a future state of existence we may surely hope to find some higher incentive to right action. In heaven, at least, the hope of reward can hardly be an operative cause; it would be treading on dangerous and to me unknown ground to ask if the same be true as to the fear of punishment. But, seriously, as teachers, we should in the first instance at least, appeal to our pupils' higher motives, and leave the appeal to the lower as a last and desperate resource.

A teacher may well begin to doubt his calling, or at least his capacity in his calling, if threats and bribes are his only means to make his pupils do their best work. And I believe an appeal to the rank list is an appeal to a lower motive. It should be the effort of us all to impress upon our pupils that they are expected to do their duty, not that they may stand high in their class, not that they may carry home to their parents good reports which shall secure to them an indulgence otherwise withheld, not that they may secure at school some immunity which 80 per cent gains and 79 per cent forfeits, but that they may stand high in their own esteem; that they may early grasp the truth that knowledge is valuable for its own sake; that the conscientious performance of duty is of itself a reward and an advance in high manliness.

The objection to this view is that — questions of high or low motives apart — boys do their work better when brought into competition with others, and that the only practicable way to give competition its full effect is by marks and a rank list. The answer to this is that it is a mistake to think that boys will do their best work with a view to the weekly or monthly or yearly rank list. Competition is unquestionably a valuable spur. But the competition should be one which knows nothing of percentages, but looks simply to the real acquirement. This competition should be daily and hourly. Every recitation should furnish a field for its exercise. The boy's attention and interest are more quickly aroused and more easily held when his thoughts are fixed on what his teacher has to say, and on what he himself has to learn, in every particular recitation, than when they are fixed on what his mark may be and on what effect that mark may have on his average. A shrewd boy, intent on his rank, will refrain from questions and from volunteering answers to hard questions, trusting to a discreet silence to maintain his reputation. But when a boy knows that any seriously put question, no matter how absurd, will receive a kindly consideration and an answer that will put him on the right path, or if he knows that an honest answer to a question, no matter how far wide of the mark it may be, will receive similar treatment, that boy has gained something more than a step in the rank list, and the teacher has spent his time better than in determining the boy's place therein, for he has gained an insight into the boy's character and mental condition that renders it — I put the point in the most modest way — that renders it possible for him to make each recitation more instructive and more improving than the last.

The mere element of competition is not lost, or even weakened by abandoning the marking system. Nothing is easier to arouse than a boy's ambition to do as well as his neighbor. A boy's dread of ridicule is at least as keen as a man's. He fears as much his classmates' jeers as he does any other force outside of superior authority at home or at school, and a little management does quite as much to urge a boy to compete with his classmates for the prize of self esteem, as does the prospect of a prize of a gold medal or a luxuriously bound book which he will never dare open, much less read. I have got quite as good work out of my boys since I abandoned marking them, as I ever did before, to say the least, and it is a substantial gain to have them fasten their attention on the lesson and not on the mark they are to get for it.

One radical objection to the marking system is that it is inevitably unjust. Not unjust, perhaps, in its main results, though that may be a matter for argument, but constantly unjust in particular instances. And boys are very quick, I am glad to observe, to note any injustice, whether in generals or in particulars. It may fairly be questioned, after all, whether the main object of the preparatory teacher is to fix ranks. May not that be left to the colleges? Should not the preparatory teacher's object be, purely and simply, to educate? Surely, one part of education is to uphold and enforce the eternal verity and value of justice. We need not now concern ourselves with the merits or the demerits of the marking system in colleges. With that we have for the present, at least, nothing to do. But in our own schools, a little careful consideration surely will show us that marking introduces a false standard and must result in a false appreciation. Take two boys: one bright, quick of apprehension, facile of acquirement, ready in expression; the other slow, plodding, tentative in all his mental efforts, and awkward in statement. If we suppose them both equally faithful, what can be more discouraging to the slow boy than to see the other constantly outstrip him in marks, constantly placed above him in the rank-list? If, as may very well be the case, the bright boy is the more careless, what can be more unjust than that his superior facility should still serve him in better stead than the other's fidelity? It does not meet the case to say, or even to assure the faithful boy, — not though we grant the generally assumed teacher's prerogative of forecasting each pupil's destiny — it does not, I say, meet the case, to assure the faithful boy, that his fidelity will, at some unnamed day, in some dimly suggested future, bring its just reward. It is not merely that he wants his reward now, but that he even more strenuously objects to its being given to some one else. I certainly believe in paying fidelity its debt as it accrues, lest mishap destroy our responsibility when the debt matures, and still more lest discouragement may cause the death of effort. My point is this. If the slow boy has all his thoughts fixed on acquirement, and if the quick boy understands thoroughly that his quickness merely means a readier mastery of his lessons and no more, one drawback as to each boy is removed, and the teacher feels that he can carry out his task, unhindered by any obligation to neutralize the laws of nature, or to alter the decrees of God. He simply takes things as he finds them, and makes each boy's gifts further his own purpose to give to each the best instruction which is in his power. To repeat it once more, and more emphatically, there is no such thing as justice in the marking system; the more rigidly we adhere to the system the greater is the injustice; the more conscientiously we follow it, the more we take away from the serious performance of disinterested and fruitful work on the part of the teacher.

But it may be said that however plausible all this may be with reference to small classes, it is quite another thing when we come to large classes. That depends greatly on how large the class is. If it is not too large for each member of it to receive directly some of the personal force of the teacher, not too large for the teacher to exert on each pupil some special influence which it is his prerogative and his alone to exert, then I think my argument holds still. A part of the teacher's duty is to hold each pupil up to the high standard of fidelity to duty for its own sake. And let me add, lest I be misunderstood and charged with mistiness or at least priggishness, — that particular part of his duty may and should be performed without preaching, without pointing the finger to texts, without direct reference to the matter in any way; but by indirection, by taking the matter for granted, as one does a man's honesty, and, if one is so blessed as to be able so to do, by silent example. If on the other hand, the class is so large that this special, personal influence on the teacher's part is out of the question, it really does not much matter whether there are marks or not. On whichever side the mistake be made, there lies a much greater mistake back of it, and it would be a waste of time to consider whether marking mitigates or aggravates it.

One or two other points may be briefly considered. It may be claimed that though we may know how each of the pupils stands of those who come under our own charge, we are still left without knowledge as to how they do in the classes entrusted to our subordinates. If we cannot trust our own marks, — and I never could trust mine, try as hard as I could to be just — I do not see why we should put any greater trust in the marks of another. Always on the supposition that our subordinate is engaged with a view to the value and not to the cheapness of his services, constant discussion of the cases requiring discussion, constant comparing of notes, and a constant effort to bring the work of all the teachers into an intelligent and homogeneous whole, accomplish better results than a weekly scanning of marks given by others under circumstances of which we must necessarily remain in greater or less ignorance. What is commoner than to hear boys remarking, "Oh! Mr. A. always marks low; I am glad I don't have more than one recitation a day to him. But Mr. B. marks high, and that's where I make it up."

Another point may be made as to the examinations, yearly or semi-annual, which, it may be assumed, our pupils are obliged to pass. Here I am obliged to admit that I am — or hitherto have been — inconsistent. I have been in the habit of marking on examinations. The results, as exhibiting the relative merits of my boys' work, have been very unsatisfactory, and I have been casting about for something better, so far without success. But examinations and recitations, after all, stand on a different footing. In the former, there is none of that frank intercourse, that free interchange of ideas, that ready communication of thought which should characterize a recitation, which, indeed, make its very life, if it be a properly conducted recitation. In an examination the pupil is left to his own resources. An examination is an attempt, imperfect and clumsy, doubtless, but still, through the weakness of human nature, an attempt necessary and salutary, to find out how much a pupil has learned and how much he knows; perhaps I should add, to find out how much he remembers without learning and without knowledge. It is to be hoped that a recitation is no longer carried on with the same idea. That should be a time for imparting knowledge, and not for extracting it. So the conditions are changed, and marking may claim more consideration here than I can believe it entitled to in the daily recitation. Still the same questions — or one of them at least — come up. How are we to put facility into the same scale with fidelity, and do justice to both? It would be highly satisfactory, and give a much neater finish to this discussion, if I were able to answer this question. If I am ever able to solve the marking difficulty as regards examinations satisfactorily to myself, I shall be happy to give the solution. Meanwhile the question is put forward as one concerning all, the solution of which will doubtless be the better reached from the consideration of all.

It may be argued that though the giving up of marks may operate well enough from the teacher's point of view, the parents have still some rights to consideration even when we are treating an abstract question of teaching; that the parents are at least entitled to some information as to the mental welfare of their boys. I should be the last —or among the last — to deny this. But on the theory that marking is, at its best, an unjust system, the necessity of keeping the parent informed of the condition of his son is only an argument the more against the marking system. If we give the parent his information merely by the weekly report, we give him partial and incorrect information, because we possess no better information ourselves. And, by the by, we give him a cheap sort of information which has this sole advantage, that it saves a good deal of careful weighing of words and thoughtful consideration. I have argued in favor of doing away with marks on the ground, among others, that it saves a good deal of unnecessary and undesirable labor, manual as well as other. Let me add to that argument that it involves a painstaking mental labor which giving marks avoids. In either view a mechanical service and toil is supplanted by an outlay of thought which at every step calls for the strictest and most conscientious devotion. I need, surely, make no apology for setting the one above the other.

To come back to the neglected parent. My own method is this. At the end of each month, I send a report of the absences, tardinesses, and dismissals of each pupil, which is a mere record of attendance. At the bottom of the printed blank, is left sufficient space for me to say to each parent exactly what I think of his son's condition, and, if necessary, exactly what I think should be done to better it. I have found this method to work extremely well, and I need not point out how much more personal a thing it is than to tell a parent that his son's average is so many per cent and so have done with it at an easy conscience. Besides, this kind of report brings about an *entente cordiale* with the parent which seems to me an improvement on his weekly signature, and in my case, at least, has caused much less discussion at cross purposes.

It seems clear that a system of injustice even though it be petty and not serious injustice; of temptation to fall into mere mechanical routine; of expenditure of time and energy, better employed otherwise; of setting up false standards and false ideals; of appealing to lower motives, must eventually give way to a system which involves not less work, perhaps, but work more profitably applied; which seeks justice, because without that it must fall into chaos; which demands a frankness of intercourse between pupil and teacher that is at once an earnest and a reward of delightful and fruitful work; which sets accomplishment and not momentary success as the pupil's goal, and which besides, perhaps I should say above all, sets before the teacher himself the high necessity of holding himself high, of making him in his calling something better than a registering machine, where the pupil drops in his coin and receives a package or a figure of dubious value and still more dubious correctness, produced by some occult working of levers and wheels.

THREE FACTORS IN EDUCATION — AND A FOURTH.

When I got into the train with that boy, he appeared to be as commonplace a boy as one could well imagine; he had a round face, with a blebby nose, freckles, and curly hair, his legs hung down from the seat and periodically clashed together, and he was eating an apple. Just before we started he purchased a bag of buns and several of those publications which, with a gross disregard of etymological niceties, we call comic and journals; these latter he read — masticating.

I did not notice him very much at first; I was busy getting comfortably settled, and, what is more, my mind was much preoccupied; I had been attending a great educational conference. I really thought nothing of the boy until we got twenty or thirty miles out of London, and then he came creeping back upon my consciousness in the most gradual manner.

The lamp over his head flickered fitfully. The figure of the boy — a paper covering his face — grew dim, and I became indistinctly aware of certain other presences in the air round him. They were at first not unlike Mr. Wallace's photographs of spooks — faint impressions, lines and glows of colour. There was one on his left hand that gesticulated, bowing and humming a good deal. An erect rigid form rose on the other side of the boy, and a luminous effect hung above him. Presently they became distincter; I *lost sight of the boy* about the same time.

I had really not noticed before that the one on the right hand was a lady, maternal, loquacious, well-dressed and comfortable; and that the left-hand figure was an equally comfortable paterfamilias. The effulgence above slowly developed until I saw before me a schoolmaster. Evidently it was a consultation on the education of the boy. I was much interested in this fortunate meeting — at the conference it had been spoken of as impossible. I suggested with some diffidence that perhaps, if they communicated their views to me, we might come to some valuable conclusions. They did so — simultaneously. It was a little difficult at first to apprehend the points at issue — especially as they all spoke at once. Nevertheless, I will endeavor to reproduce what seemed the predominant notes of their discordant voices. True it may have been the train, but what sounded like the snap of bats and balls; the thud, thud, thud of the leather; the hum of skates on the ice; and the multitudinous voices of the playground, seemed to come as an accompaniment to all they had to say.

Can it be that boys — ?

The father should, perhaps, be heard first; it is a right he claims in the columns of the *Times* and elsewhere. As I listened to him I noticed that transiently the figures before me ceased to be truly typical. They seemed to become many-headed and a trifle discordant. But not for long. Paterfamilias claimed to be distinctly a practical business man, a man of the world, a believer in common-sense. He had a sharp little nose, and when he turned his head round he described his horizon. There was nothing of the artist, philosopher, discoverer, and visionary about him — that was his boast. He cast his contention into this form naturally: Did he get his money's worth from the schoolmaster? He thought not. He paid high fees; but instead of having his son returned to him able to add up a column of figures and to write a good business letter, expert in such very necessary arts as shorthand, and commercial French and German, Yiddish, type-writing and other useful things, he left school only able to write a bad Latin verse and equally shaky Greek prose, and — for all his literature — as incapable of turning out a taking advertisement as his father was of writing a ballad. It was not of his own sons only paterfamilias thought; next to his firm, he loves his Empire. Our supremacy in the markets of the world is becoming a thing of the past. German competition is ruining the chances our own boys have in English offices, and the chances we, as merchants, have abroad. We are undersold. The day of England's glory is past — cotton handkerchiefs are made in France. He was getting sadder and sadder. Suddenly he brightened. Technical education is what we want. Let us have a sound system, under government management, by means of which our boys are taught colloquial French and German, tots, shorthand, book-keeping, type-writing — with, it may be, — he was visibly brightening — the way to draw up a prospectus and launch a company. His own sons seemed to pass out of his mind — he began to remember what he had recently read in his newspaper. "Here we are being taxed to teach School Board children the piano and all about interstellar spaces, and things of even a less practical nature than that. What use will all these be to them afterwards? Large numbers will, please God, live by cleaning boots and selling newspapers; many will go into the factories. For example, I employ fifty children at card-board-box making. They earn as much as eighteen pence a week. Why, as a rate-payer, cannot I get these children from the Board School able to make these boxes? As it is, I pay large sums of money for the education of these youngsters, and then have to teach them cardboard-box making for a year sometimes, before they are worth their salt."

Wildly youthful, perennially hopeful paterfamilias! His own boys learning type-writing, and the school children card-box making, and all successfully battling with foreign competition and keeping the firm of Paterfamilias & Co. afloat! Nothing in life except business, and nothing in the British Empire but Paterfamilias & Co., sublime Paterfamilias!

The schoolmaster's form glowed more brilliantly as the middle-class father vanished. He was a second class classic, or was it a senior optime? A most gentlemanly, athletic person, with a glorious reminiscence of that tremendous university grind (that ended in a second class) illuminating his career. His Latin and Greek (or was it Euclid?) he could teach well, and he did, tranquilly and evenly oblivious of their uselessness. I wondered how he could remain so calm while paterfamilias was so angry, but a glance at the maternal form seemed to explain all.

Over the shoulder, as it were, of the schoolmaster was a number of persons of the Micawber sort loitering about, with projects of physical training whereby children were to exercise in stuffy rooms, instead of the open air, and by idiotic antics instead of games; projects of a mystic kind called Sloyd, which would teach any pupil to hammer a nail into a waterpipe without smashing his meddling fingers; and systems of technical education for teaching navigation to plough-boys, and qualifying every man in the country to repair a marine boiler or cast a steel gun whenever he felt an uncontrollable impulse urging him to do these things. The schoolmaster, because of their importunity, and to so far satisfy them, added their proposals to his prospectus, but made absolutely no other alteration in the educational methods he pursued.

He became confidential.

"Really, we aspire to make gentlemen — like ourselves — not clerks and commercial sweaters — but men of the University stamp, who can play cricket and row, and have minds pure enough to laugh at a pun. Men with a dash of cosmopolitanism, not above billiards, or baccarat with shilling counters, you know; who can turn off a copy of verses like J. K. S. Latin, Greek, mathematics: a little of them done well — the dry bones which are clothed with flesh in the playing-fields, and on the river. As for science, we all know what science at school means — an admirable provision for your stray Darwins and Joules, who occasionally turn up even in a public school, but for the πολλοὶ, a weekly lounge diversified by pops. As for the old gentleman's technicalities" — he smiled. I smiled. Book-keeping and shorthand will undergo remarkable changes in the hands of the Reverened Blank, M. A. He was posed some little time back with *barilla*. "Muck from Mexico," he explained. When I ventured to hint one word about the wishes of fathers, he laughed. "At bottom they are with us; sometimes their digestions are bad, and the bills are rather long; they feel they must, for appearances' sake, find fault, and we have a little scene. But paterfamilias agrees with us, that the chief thing our boys must learn is good form, you know! Knowledge, which, after all, is a remarkably fleeting thing — the work I did for my degree, for instance — should be quite secondary. If he does n't, mamma does; and it is all the same in the long run. She has a mind like a Soudanese charge — disorderly, but determined. She rules."

As I listened, wondering, I noticed a change had come over the shadowy schoolmaster before me. He had become a bishop, and resumed his remarks in a graver tone. He discoursed on the great value of the classics — especially Greek. "Hard it is if we can have no monopoly in this democratic age. Our boys *must* become imbued with the literary spirit; it is the only road of social salvation. Now, when the very sanctity of Holy Scripture is questioned, our boys must be able to read their Greek Testament, and from it, at first hand, extract its inner evidences of inspiration. We shall get no knowledge of salvation from Nature. Man has spiritual faculties and æsthetic needs, and these must be nourished by classical lore. When manhood is reached, and they have become grounded in faith and reverence, then they may be taught to read Nature, and see in it a Father's hand, but 'quarried cliff and scarped stone,' — you remember what Tennyson says of botany and geology. They are — I say it with all reverence — deficient in clearness and force compared with the inspired works of His creatures. My sermons ——"

The mother had listened with awe and wonder. Ah! and who shall teach us respectability if a spiritual lord cannot? From a series of more or less incoherent remarks, I gathered that mamma wished to convey her idea that our boys must, above all, be respectable and gentlemanly. "Now what adds so much to society's good opinion of them as facility in making a Latin quotation, be it never so well known? If ever I hear '*mens sana in corpore sano*,' or any other beautiful remark in Latin, I feel quite sure that I am listening to an educated man. It is Latin which gives respectability. Our dear old vicar and his interesting curate, who are both University gentlemen, say that the first and last, or the *Alpha* and *Omega*, as they put it, of my boy's education should be Latin and Greek. Besides, I *should* like my boys to be M. A.'s — they could then read the lessons in church, in a gown and hood, and belong to a University club — and how can they pass the examinations without their classics? Why you can't even be a doctor if you are ignorant of Latin, or how would you write prescriptions? I do n't think my boys should be worried at school. I am quite sure it was never intended that brains should be burdened as they would our children's in schools to-day. It is really wicked to worry them with such unnecessary things as mathematics, chemistry, and the ologies. The chemistry lessons are positively dangerous, to say nothing of the smell. As long as my boys behave nicely, and know something of classics, I shall be quite satisfied. Their spelling, it is true, leaves something to be desired, and those horrid punishments do spoil their writing. I do think, though, that a little more care should be taken by masters about the boys' appearance, and I thought Dr. Butler did a wise thing when he sewed up all the Harrow boys' pockets. Their behaviour at table, too, should receive more attention. Mr. Oscar Browning ——"

The more mamma talked, the more confused in my mind did I get. Hers seemed a strange idea of education, with its quotations and manners. I tried to patch together a scheme which would satisfy them all, but ever more and more hopeless became the discordance.

The father, with his ideas of commercial education, the schoolmaster, with his classics and cricket, the mother, with her etiquette, all seemed to be utterly adrift. The father wants a partner, the mother wants a "young gentleman," the schoolmaster does not want too much bother; — nobody wants a man.

The boy has a body, and better exercise for the ordinary boy's body than cricket and football it would be difficult to invent. But how, in your house arrangements, in your school furniture, in your time-tables, do you consult the needs of that body? How far, Mr. Schoolmaster, do you make provision for exceptional cases? and how far do you bring home to the average boy that the body is the servant of the mind, and that bodily exercise profits nothing save as it subserves mental discipline? The boy has a mind; yet you are content to teach him, parrot-like, his declensions and conjugations, and persuade yourselves you are training his mind. Not by pure classics, nor by book-keeping and shorthand, will you ensure the growth of your boy's mind. The only training you allow his judgment is on the cricket and football fields. Yet your boy would love to draw and sketch the objects round him; he wonders at natural things, and "mucks about," as you teach him to say, at chemistry and physics in a way that ought to shame you. Is there no world outside the drawing-room of mamma, papa's shop, and the pedagogics of the Headmasters' Conference? Setting his own views aside, it is still frightfully difficult for an impartial soul, a childless humanitarian, to adjudicate between these conflicting claims. Mamma is persistent, papa inexorable; you dare not give a verdict against the schoolmaster, because he might strike. On the other hand, if you pile Pelion on Ossa with the boy underneath, you will smash him. You cannot possibly do all the mother wants, all the father would like, and all the schoolmaster confesses, in honest intervals, he ought to do. Have we not all agreed in the evils of overpressure? Even if you try, our pupil's poor little shoulders will get narrower; his brain will get hotter and hotter, fizzle and boil; and his head will swell and swell out of all proportions, like the turnip heads in "Water Babies."

Pop!

The dream-created trio vanished. The little boy sitting in front of me had finished his buns; he had burst the bag, and was quietly crushing up the remains preparatory to throwing it out of window.

A bright thought came like a ray of sunlight through the dismal gloom of my mind, full as it was of anticipations of an ill-educated future, or of a future altogether without education. I saw, behind the three so gravely wrangling over their responsibility, my dear old friend Dame Nature. The boy has bright eyes, sharp ears, flexible little digits enough, curiosity, a spirit of adventure. If mamma will only not gorge him with hampers, if papa and the schoolmaster will agree on short hours, he will learn a good deal in spite of them — in fact, most of any use here or hereafter. Papa, mamma, and schoolmaster all take themselves rather too seriously. Let us, at any rate, avoid their example, and recognise the more powerful hand that works beside our own. — *From The London Journal of Education.*

COMPOSITION WORK IN A CHICAGO HIGH SCHOOL.

BY A CHICAGO TEACHER.

THE course runs through all the four high school grades, in intimate relation with the various branches of study; not only with literature, but with history and sciences, and even with manual training. These furnish the main foundation for written work, and it, in turn, proves a decided help to instruction in them.

An important basis of composition work consists in the real experiences and pursuits of the young folks outside of school. From this vein are worked up occasional sketches, narrative, descriptive, and later, reflective. Through these sketches from common life, general habits of observation and thoughtfulness can be stimulated as in no other way. This line of work is particularly helpful, too, in calling out from pupils the naturalness, simplicity, and flow of style desirable in all their writing. Such sketches, sometimes brief and impromptu, sometimes more elaborate, with due time for preparation, are made at longer or shorter intervals throughout the course. In this general class may be included letters of all kinds.

A characteristic feature of the course is the practice of familiarizing the pupils with models of literature, in the various types of composition attempted by them. The model is usually observed first, although at times, by way of experiment, the order is reversed.

In pursuance of this general plan, I divide my beginning (first year) class into sections of about twenty each. I meet each section at least once a week; twice, if possible. The first time of meeting, I read to the pupils several entertaining short sketches of personal experience, written by former pupils or by noted authors; e. g., selections from C. D. Warner's "Being a Boy," and from "St. Nicholas." In doing this, I take care to present only such matter of experience as might occur to any one, and the homelier the incident, the better. I then ask the pupils to bring me on an appointed day each a simply written account of some experience of his own.

By the time this composition is presented, these same classes are far enough on in their physiology work to be assigned topics in that. I must confess that in the school in question, the teaching of the sciences is in the main too bookish to allow of developing the written work in them in an ideal way. But the ideal, which I have elsewhere seen very satisfactorily realized, is as follows: Observations are made in the laboratory or at home, upon the given subject of study; notes are taken, a class discussion and comparison follows, mistakes are corrected; and then a clear, connected account is written by each pupil in his permanent note-book, embodying the important results of the observation and discussion. Authorities may then be consulted, if advisable, and further information may be added to these sketches, as far as possible in the pupils' own language, and always with due acknowledgement of sources. In advanced stages of science work, a more elaborate interfusion of such information with the results of original observations, makes a special composition exercise.

Several varieties of composition thus come in play incidental to the science studies; narration, description, logical induction and deduction, definition, compilation; these all representing real thought-activity on the part of the pupils.

Under this system the written presentation forms an essential part of the work in each department, and it is so recognized and enforced both by the teachers of subjects and by the special composition teacher, where there is one.

Apparently, only a few high schools have adopted genuine "laboratory" and "library" methods of instruction. Until these methods prevail, the composition work will suffer in company with the other branches. Meantime we make such adaptations of the former to the latter as ingenuity can suggest.

The physiology teacher, for example, is induced to assign a recitation period at stated intervals, say once a week, for written reproduction of knowledge gained on a given topic. If possible, this topic is suggested in a novel form, to stimulate (or compel) a fresh style of statement; so that the language of the text-book can not be easily applied in the reproduction; for, unfortunately, too many minds are prone to grasp words rather than ideas.

Another device is that of asking the pupils to present their knowledge of some function, e. g., the circulation, in an indirect form, as in a sketch of some natural incident suggestive of the facts of circulation, or perhaps in a fanciful guise, as in the imaginary autobiography of a blood-corpuscle. In such a case, an illustrative selection is first read to the class, e. g., from Macé's "History of a Mouthful of Bread"; and then time is given, say two weeks, to concoct and execute the original plans.

Similar methods are applied in other sciences and in history and literature throughout the course. Difficulties in kind and in complexity of subject are introduced gradually, with necessary illustrations and assistance in other ways. The development in the composition work naturally follows the development of thought-power in connection with studies pursued. Advanced classes are occasionally assigned topics which require much independent research, thought, and skill in selection and handling of material. The whole course aims to give them this skill.

The composition teacher regulates the assignment of written tasks in the parallel studies, so that there may be no overpressure of such work at one time. It is assigned in one branch or the other at those points in its study where written work proves most interesting; and it is found quite possible to obtain an alteration in this way.

I have spoken of the weekly or semi-weekly section meetings. These give opportunity not only for directions, criticisms, and illustrations, but also for discussion of simple rhetorical principles, and for special exercise in technicalities. Punctuation, capitals, and construction are reviewed, and their principles further developed through study of illustrations. Short passages for exercise in applying principles are dictated, and the compositions are also corrected in these regards.

The main conception of my plan is by no means original with me, but I have made experience of it in every possible way, — as pupil, as teacher, as observer of other teachers, and I am convinced it is the only rational one. I am at present making a study of its working in high schools in this neighborhood, and am thereby gaining both a greater confidence in its practical, as well as its theoretical, soundness, and a clearer notion of methods of applying it. The surest way for a high school to gain results under this plan, is to bring its methods in every department close up to the most liberal "laboratory" and "library" standards; but while working toward this ideal much can be done to render the practice of written English and the training in other departments mutually helpful.

[From the teacher who wrote the above article we have received exceedingly creditable specimens of the work done. Lack of space prevents our giving them here.—Editor of The Academy.]

THE TOO AMBITIOUS TEXT-BOOK.

It may seem impertinence or boredom — one is always open to criticism — or an insistence upon "shop" in the weeks of relaxation, but to the writer it seems anything but needless or wanton to take the earnest schoolmaster aside, to buttonhole him gently, and to whisper in his ear: "Come, we have talked of registration, we have conferred and contemplated our high moral mission, we have discussed pension schemes, and debated a teaching degree, and now it is holiday time. We cannot always live in altitudes. Let us talk about the little text-books we deal with every day."

We would begin with him sunnily, let him meander among his eyot likes and dislikes, speak at first of varied type and other vast improvements, convenient bindings, lithographed diagrams, and cheap maps. We would try and get at it gradually, very gently and slowly, at that sinister suspicion we have engendered, and which we contemplate dropping in his ear as he lies like Gonzago in the sunlight.

At last out it would come, the fearful truth! The little text-book, the close companion of every day, is showing vices — ambition, a divided aim, treachery. Its accusation unrolls — the little text-book is an insidious rival and a foe. It would disturb him, no doubt, but the thing must sooner or later be done; and we should, of course, have to prove our case.

And once, alas! the school-book was as faithful a companion as a shepherd's dog. The teacher *taught;* the school-book was an unpretending and useful collection of declensions, principal parts, and exercises "subject to approval." It was, as it were, an armor-bearer to the warrior who eloquently fought against ignorance, and "let daylight through" a class. Or, again, it was as pages, bearing the train of a peer — helpful in the triumph, necessary, but without honour. A certain mutual trustfulness and affection grew, and sometimes grew to romantic proportions, between the teacher and his handbook; but, alas! these pleasant idylls are becoming rarer; the text-book, once so faithful, we assert, rises against its master. It is an age of selfish insubordination, and the very inanimate paper intrigues, usurps, and betrays.

It began in the "outcast" sections of our schools, among the science and modern language books. The fact is, that when all that talk about teaching science began, plenty of headmasters found themselves disinclined to add a competent science master to their schools — they were rarer then — and so, little recking of its effect upon the thing's vanity, these heedless heads *asked the text-book to take the classes.* That is really what it amounted to. They got a master, of course, to sit in the room while the thing was teaching; but he simply said, "Page 45 to page 60 to-day, boys," and saw that they attended.

Now the text-book, abruptly, and, we must confess, recklessly, enfranchised, did its work neither well nor loyally; it neglected a lot of the boys — we may put it that way, for action and reaction are always equivalent — and intrigued with the rare few who had a taste for science. It told them things the master did not know, prompted them to ask impossible questions, and behaved like the proverbial beggar on horseback. This was the beginning of the demoralization.

The text-book, despite its actual want of success, like many commonplace, well-meaning persons one might think of, was bitten with the idea that it was born to be a teacher. It displayed initiative, and, taking advantage of the linguistic deficiencies of many of the smaller schools, boldly made the modern languages teaching its own. Other teaching, the oral teaching that can alone avail in this department, vanished. The text-book arranged the work, set the exercises, and had them corrected through the medium of a Key, while a pitiful usher undertook the drudgeries of discipline.

Ah, schoolmaster! the vacation sunlight is browning your face to the hues of health, but can you hear this little suggestion and keep your vacation peace? The text-book, for instance, is steadily invading literature. *You* ought to read the classic "set" for the Christmas Examinations with your pupils. It is for *you* to give it life, and help out their limited experience, but the text-book intervenes. Geography, again, has been snatched from you, and made so luminous, so attractive, so readable, that you are out of it — you know *you* never teach geography now. Need one expatiate? Does no inkling of the future turn your strawberries and cream to gall and wormwood, your boyless tranquility to a convict expectation?

For, unless you gallantly face this ominous revolt, I am convinced that *the fate of the schoolmaster is merely a question of time.* The prospectus of the future will run, perhaps, as follows: "The school is managed in strict accordance with the directions in Professor Jimjam's scheme of study, and his celebrated text-books are alone used in the establishment. All the masters are members of the corps of Commissionaires, and no effort is spared to ensure the punctual delivery and exchange of text-books and keys to the pupils. The diet is impeccable, and the site of the school one of the healthiest in England."

The traitor text-book — the insidious foe he cherished in the soft folds of his academic gown, will squat, guiltily triumphant, in the seat of the headmaster. And as for the schoolmaster — all schoolmasters — the place that knew the schoolmaster will know him no more. He will have gone after the postboy, the crossbowman, and the dodo, into the mysterious shadows that surround existence, not perhaps improved upon but inexorably superseded.

I am no baseless alarmist: I say there is a certain measure of hope, but I earnestly warn the schoolmaster to keep his eye on the ambitious, wordy, and explicit text-book. It attacks through indolence and incapacity, it renders possible the economy of the pitiful usher at nothing a year; but it does away with all the excellencies of teaching. At the best it is lifeless, rigid, and unsympathetic; and that ready adaptation of statement to mind which is the duty and virtue of the teacher, is impossible. Let the teacher teach, and let the text-book be a compilation of maps, lists, vocabularies, diagrams, propositions, and maxims, or the author studied, as the subject requires. With the text-book presenting and explaining a subject one way, and the teacher with *his* almost certainly different presentation of the case, there can be nothing but confusion; and the text-book triumphant is even worse than confusion. For where is the teacher then?—*From The London Journal of Education.*

THE SIXTH ANNUAL MEETING OF THE NEW ENGLAND ASSOCIATION.

The sixth annual meeting of the New England Association of Colleges and Preparatory Schools will be held in Harvard Hall, at Harvard University, Cambridge, Mass., on Friday and Saturday, October 16th and 17th, 1891. The President and Fellows of Harvard College will entertain the Association at supper on the 16th, and at luncheon on the 17th.

The programme for Friday afternoon promises a specially interesting session to those who were fortunate enough to be present at the discussions of the same question at the meeting of the Classical and High School teachers in Boston last April. Mr. Frank A. Hill, of the Cambridge English High School, is to read a paper on "The Practicability of Abridging the Course Preparatory to College," and the discussion is to be opened by President Eliot.

On Friday evening President G. Stanley Hall, of Clark University, is to present a paper on the "Outlook in Higher Education." On Saturday morning the subject for consideration is "Natural Science as a Requisite for Admission to College." Professor Samuel F. Clarke, of Williams College, will read the paper, and Dr. William Gallagher, Principal of Williston Seminary, will begin the discussion.

A full report of this meeting will be published in THE ACADEMY for November.

BOOKS RECEIVED.

In the September Academy in our notice of *An Etymological Dictionary of the German Language*, by Friedrich Kluge, translated by John Francis Davis, we neglected to give the name of the American publishers, Messrs. Macmillan & Co., 112 Fourth Ave., New York.

English Composition. **Eight lectures given at the Lowell Institute by Barrett Wendell, Assistant Professor of English at Harvard College. New York: Charles Scribner's Sons. 1891.**

Professor Wendell has made an exceptionally interesting book on a subject usually held to be exceptionally dry and repulsive. By no means has he merely added one more to our abundance of conventional rhetorics. His book embodies the results of his experience as a teacher of college youth, and frankly avows its origin by its frequent references to the adventures of boys in their essays at literary expression. The rhetorics we are used to have often seemed to us to have had their genesis in previous rhetorics, and to be concerned chiefly with the passing on of the torch of tradition. The familiar old Greek names are sure to reappear to tease us afresh, the old prohibitions are reiterated as solemnly as ever, and even the old examples of bad usage, drawn from the writers exploited by Blair and Campbell, are cited again for our edification. But Professor Wendell does nothing of this kind. He makes a little book that, by virtue of its simplicity of language and its happy point of view, is readable to "the average man." The average listener to popular lectures, if only he has attained the power to appreciate differences of style, and has perceived that his own writing, however trivial the occasion of it, must, for better or for worse, have its style, is mature and cultured enough to follow the book intelligently to the end and to receive the instruction which it aims to impart.

The book is therefore a popularization of rhetorical doctrine. Yet, having said this, we must hasten to say, further, that it does not come under the condemnation that has to be passed on many manuals that undertake to popularize science, that they absolve the reader from the necessity of thinking, and leave him to carry away handfuls of crude knowledge that he cannot assimilate. This is a popularizing book in the sense that it admits the reader to its processes and leads him along the paths of elaboration by which the conclusions are reached. We do not know what, to Professor Wendell's mind, are the denotation and the connotations of the term *pedagogy;* but we affirm that he is herein a consummate pedagogue, in that he obeys the first maxims of pedagogic art when he takes his readers into his confidence and makes no mystery of his learning, but, by showing the utter inevitableness of his deductions, raises his pupils at last to the rank of full partnership with himself in the possession of his convictions.

We esteem the book all the more because it does not profess to be intended for use in schools, but is addressed to the general public. It is eminently a book for teachers, whom it will serve as a stimulus to independent thinking, and whom it will justify in discarding much cumbrous nomenclature that has hitherto needlessly burdened rhetorical teaching. It is an admirable book also for the teacher to commend to his better pupils as collateral reading. The older high school pupils would certainly find it readable. Nor would the book be altogether unsuited to class work, provided the lesson-learning method could be set aside, and the method of free discussion of principle and practice be inaugurated. It would be difficult to imagine better work in rhetoric than would easily and naturally come to be done where Professor Wendell's chapters should be taken as starting-points, and the order of the day should be the search, in books and compositions, for illustrations and confirmations of his doctrines.

The plan of the book is simple. The first of the eight chapters is an interesting exposition, in outline, of the whole subject, preparing the reader to understand and foresee its development from stage to stage. Then follow four chapters devoted, respectively, to words, sentences, paragraphs, and whole compositions.

The criterion of words is good use: it is not any theory concerning their philological origin or their size. The writer has no business to affect Saxon words or Latin words, short words or long ones. He must command the right word; and to this end he must be bred in the usage of written speech and have at his command a good vocabulary. But in choosing his words, the writer must pay heed, not only to their dictionary meanings, that is, to their denotations, but to their implications and their suggestions also, that is, to their connotations. A thesaurus or a treatise on synonymy may present us a word, but only familiarity with the speech of good writers and talkers can unfold to us the implicit content of it, or what we might call its overtones.

Illustrating *barbarisms*, Professor Wendell comes home to our business and bosoms with the following stricture on a bit of innovation that lovers of pure English can only lament. " There are few more unidiomatic absurdities than those of the gentlemen who insist on spelling Alfred Aelfred, and Virgil with an *e*, and otherwise on impairing that irrational, spontaneous variety which people who love English know to be one of its most subtile charms."

In each of the three chapters on sentences, paragraphs and whole compositions, Professor Wendell treats his theme in the three phases of *unity*, *mass*, and *coherence*. In every stage of speech that is more complex than the word, that is, in every assemblage of elements that are put together, or composed, there must be structure according to principles. It is these principles of structure that the author undertakes to formulate under the conveniently simple and untechnical names, — unity, mass, and coherence. The sentence, the paragraph, the chapter, should group itself about one central idea: it should be so planned, with reference to its external form, that its chief parts shall readily catch the eye; its internal arrangement should be such that the relation of its subordinate parts to each other shall be unmistakable. Very interesting are the author's discussions of unity, good massing and coherence in sentences and paragraphs, and his suggestions of tests for ascertaining whether sentences and paragraphs possess these desirable qualities. He gives no body of rules, but dwells persistently on the principles, rightly considering that a learner, once imbued with the principles, is above the necessity of rules, — can, in fact, make and apply his own rules as he goes.

The chapters hitherto described discuss the " outward and visible aspect of style." The last three deal, " not with its elements, but with its qualities." These chief qualities of style Professor Wendell names, using the conventional terms, *clearness*, *force* and *elegance*. Not so conventional is his philosophy of the matter. " In a single sentence," says he, " to sum up all I have tried to tell you, all that ten years of toilsome work have taught me: the secret of Clearness lies in denotation: the secret of Force lies in connotation; the secret of Elegance lies in adaptation."

Style, as it exists at any period, Professor Wendell finds to be the result of a conflict between good use and the principles of composition. The principles, whether consciously formulated or not, exert a steady upward and onward pressure, striving to bring practice to coincide with themselves. But usage is the conservative element that tends to make each new composer of speech follow the existing fashion of utterance. Modern prose has developed out of Elizabethan by breaking away from usage and conforming to principles. It is impossible to tell on what principles the Miltonic sentence is constructed. It is easy to detect some of the principles that underlie the style of Burke or Macaulay. Thus there is a secular, as well as a personal, element in style. Each individual conforms to his environment, and yet tries to express himself as well as he can. Each individual *must* conform to his environment under penalty of not being understood or of giving offence and being refused audience.

Professor Wendell's work cannot with impunity be neglected by any teacher of English composition or of English literature. It is full of matter directly pertinent to the furthering of every such teacher's work.

Exercises in Rhetoric and English Composition, by G. R. Carpenter, Associate Professor of English in the Massachusetts Institute of Technology. Boston: Willard Small. 1891.

By adjusting his book at all points to that of Professor Wendell, above noticed, Professor Carpenter makes for the latter a companion volume, to accompany it into the school-room and to introduce its teachings there in more practical and manageable form. The two books should go together. No teacher can spare Professor Wendell's, and no pupil can spare Professor Carpenter's; and every pupil of the better sort will be stimulated by the "Exercises" to consult the larger book for further exposition and elucidation of principles. The two books together constitute a genuinely new and original treatise on rhetoric. In the one the principles are set forth in a novel and interesting manner; in the other they are applied and enforced with pedagogic skill and illustrated with material freshly drawn from the actual lapses of youth writing for a teacher.

Professor Carpenter's aim has been simply to make a book that should be serviceable to himself as a teacher of boys. No maker of a text-book ever divested himself more completely of all other ambition. A most absolute self-renunciation is the main note of his work. Unless we are greatly mistaken, this simplicity of purpose, this straight-forwardness of procedure, will prove very welcome to teachers of English, who have begun to feel an incongruity between the labored language of their rhetorical text-books and the scanty benefit to their pupils' power of expression that these text-books can be made to yield. Professor Carpenter felt the need of illustrative material in perfectly accessible form: this material he had at hand in abundance: he has arranged it under Professor Wendell's categories: his modest little book is the result.

The method of the book is simply this: in each chapter is given a brief and simple *résumé* of a portion of doctrine; then follow examples, both of forms to be noted for excellence and of forms that need correction or improvement.

In Chap. I. the author explains that rhetoric is to be regarded as an art, rather than as a science, and that its standard is good use. "Good use, as codified in reputable dictionaries or as exemplified by reputable writers or speakers, is, then, our first standard in the study of rhetoric, our first clew to the problem which every writer finds before him, — how he can best make the one to whom he is speaking or writing understand what he means."

The dictionaries, therefore, undertake to codify good use, but do not make it or prescribe it. As good use is an intangible, changeful thing, and as every codifier is a person with his personal equation, there is never any distinct and final settling as to what good use precisely is. Then the dictionaries are comprehensive, and try to present all actual use, good and bad, because everything that is written should be made intelligible, and dictionaries intended to interpret only good literature only to refined readers are unthinkable. Good use seem to us an *ignis fatuus*. The fact seems to be that there are many good uses, and that the teacher of rhetoric sets up a peculiar scholastic standard. He has his special good use. This unconfessed and uncodified good use of the school room is what weighs so heavily on young writers and makes them amaze Professor Hill with the dead, uninteresting monotony of their work. The existence of this peculiar scholastic good use is doubtless to be accounted for by referring it to the fact that generations of teachers of small culture have been compelled by the exigencies of their situation to know a good deal and so have been accustomed to resort to text-books rather than to the primal sources of knowledge. All sorts of things appear in the writers, but the teacher looks askance upon innocent and engaging freedoms and is nothing if not formal and precise. Young people's good use comes into collision with the magisterial good use of the correctors of compositions. The result is an English far more dreadful than any writing can be whose sole fault is that it violates rules and admits instances of bad use.

Five chapters on Words have the following subjects: Barbarisms; Improprieties; Vocabulary; Too Many; Too Few; Long Words *versus* Short Words; Anglo-Saxon Words *versus* Latin Words; Simple Words *versus* "Fine Writing." Five chapters on Sentences treat the following themes: Punctuation; Solecisms; Long and Short, Periodic and Loose; Unity; Emphasis and Coherence. Then follow a chapter on Paragraphs and another on Whole Compositions.

Where Professor Wendell says "Unity, Mass, Coherence," Professor Carpenter says "Unity, Emphasis, Coherence." Emphasis seems to us the better word. Unity and Coherence were already rhetorical terms. Mass had to be given a new meaning. Emphasis also is a familiar word in language-teaching. We do not see that what Professor Wendell meant by "mass" was anything different from emphasis obtained by arrangement.

In three more chapters Professor Carpenter treats the Qualities of Style: Clearness, Force, and Elegance.

On the last page of the book we find an interesting body of "Abbreviations used in correcting themes." Probably every corrector of juvenile English has had to use such abbreviations. In some sort, a teacher's devices for this purpose reveal his aims and his methods. Correcting compositions has but little analogy with reading proof. The instructor's ideals determine what he shall look for in a theme, for his teaching will have been already determined by his insight into principles, and he will naturally look for the results of his peculiar and personal instruction, as he will have adapted it to the needs of his learners. Professor Carpenter's abbreviations match exactly the categories of his chapters. Hence they refer to the larger aspects of rhetorical criticism. They are certainly very suggestive as to methods of correction.

A caution proper to give to correctors of school composition is that they refrain from overdoing the business. After a few points have been taught with all possible impressiveness, it may be assumed that the pupils will be in a suitable state of mind to be interested in criticism of their success in embodying these few points in their work. If coherence has been explained and illustrated, pupils will, under due guidance, criticize themselves and each other with interest and profit, having an eye especially to coherence, to which their attention has just been called. To attempt to correct everything is futile. The young mind is dazed by too much detail of correction, and permanent impressions do not issue from a chaos of multifarious marking and noting. Not every weak and bad composition deserves to be corrected into a good one. Some portion of the badness of a bad composition should be singled out for a vigorous assault. One after one the outworks of badness can be carried.

Professor Carpenter's book is so small, — it has but 131 pages, — that it suggests at once the need of peculiarly intelligent and original teaching. A large book contains matter for every occasion, and supplies lessons for all the days of the term. A small book gives outlines and leaves it to the teacher to expand these outlines into artistic pedagogical shapes. If the teacher knows his business he can say things much more impressively than the text-book can. How much so-ever of illustrative matter the text-book may contain, the daily doings of the class will furnish more and better. The small book leaves much to the initiative of the teacher.

Select Essays of Macaulay. Milton, Bunyan, Johnson, Goldsmith, Madame d' Arblay. Edited by Samuel Thurber. Boston: Allyn & Bacon. 1892. 8vo. xiv. 205.

Bricks without straw: Literature without books. That was the lot of many pupils of the former generations. Mr. Thurber's book is prepared for use in what he calls the library method of studying English literature. The wonderfully increased number of school libraries and of public libraries now makes it possible that the school children may take their literary training somewhat as they take their manual training, by working with the same tools that they are to have at their hand in out-of-school life. If there are schools and villages without proper library privileges, the person of leisure may not be wasting his energies that finds an unoccupied room, collects subscriptions, and becomes for a time, at least, a self-appointed public librarian. But Mr. Thurber's book suggests one almost inherent fault of the public library system. It is books that the boy and girl want to be turned loose among, and not reference lists and card-catalogues. The ability to use these latter aids is a necessary acquisition to the student in this nineteenth century; he is heartily thankful to their makers. But it is the browsing among books that stimulates, it is the sight of them at their best as they stand supported by their fellows in the alcove, the thrill that the touch of their smooth sides gives, the pungent must of the old leaves, the coquettish glance back from a title, or a margin, or an autograph, or a book plate, or a religiously tooled border, here and there, that catches the student's affection and makes him love them apart from any homely goodness or worth that they may have. There are chance acquaintances, in the quiet alcoves, that sometimes ripen. Now in a public library these privileges of general, social converse must be limited to few or, more likely, forbidden to all; and if the books are "stacked," which disposition of them is almost compulsory, all their graces are hidden as in a monastery, and you cannot see one of them unless it happens to be personally known to you; then you can send in your card, when your friend will appear at the grating. So it is from the school library and the home collection of books that the scholar is likely to learn to love them. The school library, we can trust, exists; the scholar's collection is at least begun when he owns a book like this of Mr. Thurber's — whose own introductory essay is perhaps not the least interesting between the covers — a book that can stand on his shelf, a legitimate piece of literature, at least until he arrives at a complete set of the Macaulay essays. E. P. K.

A Synopsis of Old English Phonology: being a systematic account of Old English vowels and consonants and their correspondences in the cognate languages. By A. L. Mayhew, M. A., joint-author of A Concise Dictionary of Middle English. Oxford, at the Clarendon Press. 1891.

Mr. Mayhew's work is important as summarizing and tabulating the results of recent investigations in the field of Old English sounds and their relations. The science of etymology is undergoing reconstruction in accordance with newly discovered phonetic laws. No one can henceforth understand the tracing of roots through the various languages of the Indogermanic family without some knowledge of the ascertained principles in accordance with which sounds have developed themselves from stage to stage. Any respectable attainments in linguistics must embrace the fundamentals of phonology. Hence a book of moderate size and moderate price seems destined to fill a gap in our apparatus of study. These requisites Mr. Mayhew's book seems to us to meet. For sale by Willard Small, 24 Franklin street, Boston.

The eleventh instalment of the *Wörterbuch* to Maetzner's *Altenglische Sprachproben* brings this slowly growing work up to the word *makien*. To produce the 184 pages of this *Lieferung* has required three years. What arrangements exist for the prosecution of the task after Edward Maetzner shall have ceased to labor at it we know not. Here is the dictionary now at last about half finished; and part I. of the text-specimens, the Poetry, is already out of print and rarely obtainable as libraries are dispersed.

Considering Maetzner's dictionary as completed, it forms the fullest and most interesting Middle-English dictionary as yet produced. The only books known to us that undertake to cover the same ground are Mayhew and Skeat's built-up affair, which simply combines the numerous special vocabularies that Mr. Skeat had prepared for his volumes of selected texts, and Mr. Bradley's edition of Stratmann. The latter is the book which the reader of Middle English must have at any rate. But Maetzner has advanced far enough to be very useful, and the fate of the *Poesie* may well suggest the desirableness of being beforehand in securing the earlier half of the dictionary while it may be had.

We must warn our readers, however, that the appearance in an imported book of Middle, as well as of Modern English words, makes the book liable to duty. How old English has to be to be a foreign language in the eye of the custom-house we do not know. We offer the suggestion that it might be well to ascertain this point, in the hope that Custom-House English may yet be adopted as a new name to mark off squarely the earlier speech from the later.

A First History of Rome. By W. S. Robinson, M. A., Assistant Master at Wellington College; late Scholar of Trinity College, Cambridge. With illustrations. London: Longmans, Green & Co. New York: 15 East 16th street, 1890.

This book is designed for the use of a class of pupils younger than those who ordinarily undertake the subject in our secondary schools. It is, however, interesting, and presents the subject matter with a good feeling for the relative importance of different events. Such maps and illustrations as are introduced will be found genuinely helpful, and the whole work is arranged in exceedingly teachable form. The author has the appearance at times of trying to let himself down to the understanding of his readers in a way which does not seem to us specially fortunate, but his narrative is everywhere clear and simple, and usually entirely interesting.

A Conference on Manual Training. The papers read and a phonographic report of the discussions had at the sessions of a conference on Manual Training, held at Boston, April 8–11, 1891. To which is appended some account of the exhibits made of the methods and results of Manual Training, including also sewing, cooking, drawing, and the study of form and color. Edited by Mrs. Isabel C. Barrows. Boston: Published by the New England Conference Educational Workers, John O. Norris, Secretary, Melrose, Mass. Price, 50 cents.

First Lessons in Language. Gordon A. Southworth, Master of the Prescott School, Somerville, Massachusetts, and F. B. Goddard, Ph. D. (Harvard), authors of "Our Language," and "Elements of Composition and Grammar." Leach, Shewell & Sanborn: Boston and New York.

Riverside Second Reader. *Hans Andersen's Stories.* Newly translated. In two parts. Part II. Houghton, Mifflin & Company, Boston: 4 Park street; New York: 11 East 17th street. The Riverside Press, Cambridge. 1891.

Scott's *Lady of the Lake*, with Introduction and Notes, by G. H. Stuart M.A. Principal and Professor of English, Kumbakonam College. London: Macmillan & Co., New York. 1891.

Painting in Oil. A Manual for the use of Students. By M. Louise McLaughlin. Second thousand. Cincinnati: Robert Clarke & Co. 1888.

Heath's Modern Language Series. *Materials for French Composition.* By C. H. Grandgent, Director of Modern Language Instruction in the Boston Public Schools, formerly Tutor in Modern Languages in Harvard University. Part II. Exercises based on *Peppino.* For pupils in their second year's study of French. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

Das Heidedorf. Von Adalbert Stifter. Edited for the use of schools by Otto Heller, teacher of German, The DeLancey School, and Wm. S. Blight's School, Philadelphia. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

Introductory Language Work. A simple, varied, and pleasing, but methodical series of exercises in English to precede the study of technical grammar. By Alonzo Reed, A. M., author of "Word Lessons" and joint author of "Reed & Kellogg's Lessons in English," etc. New York: Effingham Maynard & Co., Publishers. 1891.

A Primary Word Book, embracing thorough drills in articulation and in all the difficulties of spelling and sound to be met with in primary reading. By Sarah E. Buckbee, Principal of Primary Department, School No. 19, New York City. Boston, U. S. A.: D. C. Heath & Company, Publishers. 1891.

Heath's Modern Language Series. *Polyeucte*, par Pierre Corneille. Edited with an introduction and notes by Alcée Fortier, Professor of the French Language and Literature in Tulane University of Louisana. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

Pestalozzi: His Educational Work and Principles. By Amos M. Kellogg, Editor of "The School Journal" (N. Y.), author of "School Management." New York and Chicago: E. L. Kellogg & Co. 1891.

Plane and Solid Geometry. By Seth T. Stewart. New York, Cincinnati, Chicago: American Book Company.

Trois Contes Choisis, par A. Daudet. With notes by R. Sanderson, Professor of French in Harvard University. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

The English Language. A brief history of its grammatical changes and its vocabulary. With exercises on synonyms, prefixes and suffixes, word-analysis and word-building. A text-book for high schools and colleges. By Brainerd Kellogg, LL.D., Professor of Rhetoric in the Brooklyn Polytechnic Institute, and Alonzo Reed, A. M., author of "Introductory Language Work." New York: Effingham Maynard & Co., Publishers. 1891.

Elementary Science Lessons. Being a systematic course of practical Object Lessons illustrated by simple experiments. By W. Hewitt, B. Sc., Science Demonstrator for the Liverpool School Board. Standard II. London: Longmans, Green & Co., and New York: 15 East 16th street. 1861.

Longmans' School Grammar, by David Salmon. New Edition, revised. New York: Longmans, Green & Co. 1891.

Elementary Text-Book of Botany for the Use of Schools. By Edith Aitken, late Scholar of Girton College, and Certificated Student in First-class Honors in the University of Cambridge. London: Longmans, Green & Co., and New York, 15 East 16th street. 1891,

Elements of Civil Government. A text-book for use in Public Schools, High Schools, and Normal Schools, and a manual of reference for teachers. By Alex. L. Peterman, late Principal and Professor of Civil Government in the Normal School of the Kentucky State College, and member of the Kentucky State Senate. American Book Co. New York, Cincinnati, Chicago.

Physics by Experiment. An Elementary Text-Book for the use of schools. By Edward R. Shaw, Ph. D., Principal of the Yonkers, (N. Y.), High School, and Lecturer, School of Pedagogy, University of the City of New York. Fully illustrated. New York: Effingham Maynard & Co., Publishers. 1891.

Heath's Modern Language Series. *Colomba*, par Prosper Mérimé. With Introduction and Notes by J. A. Fontaine, Ph. D., Professor of Modern Languages in the State University of Mississippi. Boston, Mass., U. S. A.: D. C. Heath & Co., Publishers. 1891.

The Complete Music Reader, for High and Normal Schools, Academies and Seminaries. By Charles E. Whiting, formerly teacher of music in the Boston Public Schools. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

The Principles of Agriculture for Common Schools. By I. O. Winslow, A. M. New York, Cincinnati, Chicago: American Book Co.

Mademoiselle de la Seiglière. Comédie en quatre actes, par Jules Sandeau. With an Introduction and English Notes by F. M. Warren, Ph. D. Boston, U. S. A.: D. C. Heath & Company. 1890.

A Text-Book of Geometrical Deductions. Corresponding to Euclid. Book I. By James Blaikie, M. A., Late Fellow of Gonville and Caius College, Cambridge, and W. Thompson, M. A., B. Sc., Professor of Mathematics, Victoria College, University of the Cape of Good Hope. Formerly Examiners in Mathematics in the University of Edinburgh. London: Longmans, Green & Co., and New York: 15 East 16th street. 1891.

The American Citizen, by Charles F. Dole. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1891.

An Introduction to Phonetics, (English, French, and German), with Reading Lessons and Exercises, by Laura Soames; with a preface by Dorothea Beale. London: Swan Sonnenschein & Co. New York: Macmillan & Co. 1891.

Elementary Lessons in Heat, Light, and Sound. By D. E. Jones, B. Sc. (Lond.), Professor of Physics in the University College of Wales, Aberystwyth. Illustrated by numerous engravings. London: Mamillan & Co., and New York. 1891.

The Number-System of Algebra. Treated theoretically and historically, by Henry B. Fine, Ph. D., Professor of Mathematics in Princeton College. Leach, Shewell & Sanborn. Boston and New York.

Herodotus VII., with notes by Agnata F. Butler. London: Macmillan & Co., and New York. 1891.

Maxwell's English Series. *Advanced Lessons in English Grammar*, for use in higher grammar classes, by Wm. H. Maxwell, M. A., Ph. D., Superintendent of Public Instruction, Brooklyn, N. Y. New York, Cincinnati, Chicago: American Book Company. From the press of A. S. Barnes & Co.

Morning Exercises for Public Schools. By Edwin C. Thompson, Superintendent of Schools, Saginaw, Mich.: Lee & Stoelker, Printers. 1890.

On Self-Culture. The Culture of the Intellect. On Physical Culture. On Moral Culture. By John Stuart Blackie, Professor of Greek in the University of Edinburgh. New York and Chicago: E. L. Kellogg & Co. 1891.

The Bible Abridged: being selections from the Scriptures of the Old and New Testaments, forming a reasonably complete outline of the important events in Sacred History in their proper sequence, and in the closest connection practicable. For families and schools. Arranged by the Rev. David Green Haskins, S. T. D. Boston: D. C. Heath & Co. Publishers. 1890.

First Steps in Greek. By F. Ritchie, M. A., The Beacon, Seven Oaks. London: Longmans, Green & Co., and New York: 15 East 16th street. 1891.

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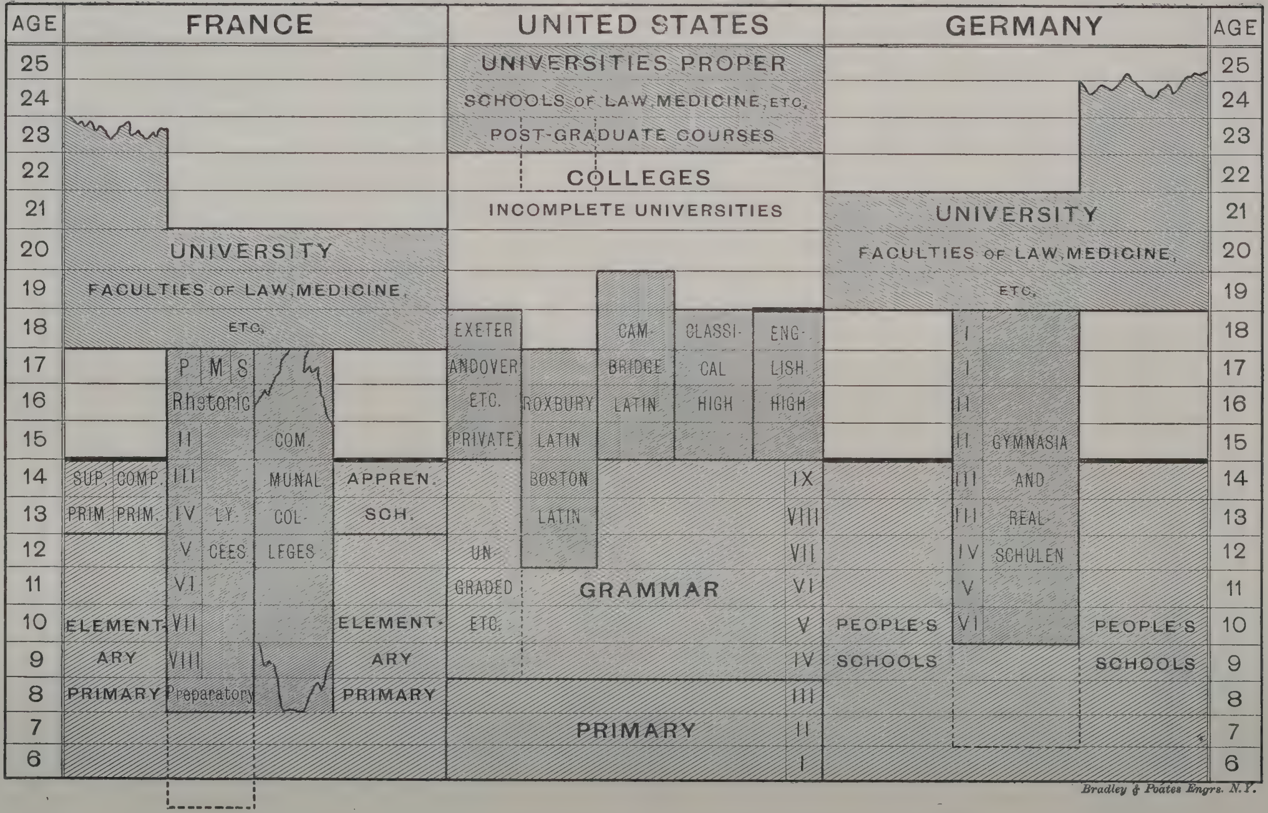

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THE ACADEMY:

A JOURNAL OF SECONDARY EDUCATION

DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND ACADEMIC DEPARTMENTS

VOL. VI NOVEMBER 1891 NO. 8

THE PRACTICABILITY OF ABRIDGING THE COURSE PREPARATORY FOR COLLEGE.

F. A. HILL, HEAD MASTER CAMBRIDGE ENGLISH HIGH SCHOOL.*

THAT pupils can be better fitted for college in the time now devoted to preparation goes without saying. This is simply asserting the possibility of improvement. Without this faith, we should cease to grow. And if we concede that there may be gain in quality within the present time limits, we might as well concede that the present levels of scholarship, such as they are, are attainable in less time. These concessions, however, leave several questions still open, which will be considered in due order.

It is wise, in discussing a matter that involves so many elements as the question before us, to make some inquiries about the teachings of experience; and we naturally go with such inquiries to France and Germany. To aid myself in grasping more firmly the time limits and relative positions of primary, secondary, and university education in France, Germany, and the United States, I have prepared a chart, a [reduced] copy of which is before you. The horizontal lines represent grades or years. There are twenty of these grades or years, from six to twenty-five inclusive. The most heavily shaded areas represent approximately the years devoted to secondary education. Below them are areas in lighter markings that represent the years given to primary education.

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* See page 429.

Thus the pupil who begins at six and moves steadily through the various grades reaches the university, in France, at the age of eighteen; in Germany, at the age of nineteen. In the United States, he reaches college at the age of nineteen, and the university proper at the age of twenty-three. The French youth may complete his law studies in the university at the age of twenty-one; the German, at the age of twenty-two; the American, not until he is twenty-six. Quick and well-trained young men in the United States may gain the top two or three years earlier, while tardy young men abroad need two or three years longer.

Now the chart tells more impressively than words how much longer it takes the American youth to complete his training than the French or the German. If we show little or no superiority to justify these three, four, or five additional years of study, — nay, if with this enormous time advantage, we fall short of good standards attained abroad, then our twenty years' curriculum may well be challenged.

To avoid a possible misconception, let me say that the American young man — the law student, for instance — when he reaches the summit at the age of twenty-six, is admitted to the bar and may begin to practise immediately. The Frenchman, however, must add to his university course two years of training in the practical details of law before he is permitted to practise. The German must add five years or more of such technical training. Thus the Frenchman, the American, and the German who begin their schooling at the same age will reach the actual practice of law at the ages of twenty-three, twenty-six, and twenty-seven respectively. The Frenchman and the German are not likely to fall under these ages. Indeed, the French age for beginning practice is more likely to be twenty-four or twenty-five, while the German seldom gets to work for himself before he is twenty-eight or twenty-nine. The American, on the contrary, by the time he receives his degree from the law school, is as likely to be under twenty-six as over; and if he chooses to omit the college altogether he may get his law diploma as early as twenty-two, or even twenty-one. This is possible because the American has little more to restrict him than his own pleasure or conditions, while the Frenchman and the German up to the end of their preparatory work are subject to state laws that practically forbid reduction of the age limits I have given, while their rigor tends to raise these limits.

Waiving, then, all questions about the grades of qualification these young men have attained, — I know it is leaving Hamlet out of the play, — the young American lawyer has the age advantage; for, so far as the time of beginning practice is concerned, he is ahead of the German under any view of the case, and may distance the Frenchman handsomely.

But there is a more serious question than saving a year or two of time. Our three young men, whatever the ages at which they are permitted to practise, may certainly complete a three years' course of legal study, — the Frenchman at twenty-one, the German at twenty-two, and the American at twenty-six. It is entirely fair to say that, in a certain grade and quality of attainments, chiefly classical, the American is probably behind the Frenchman, and certainly behind the German. This is not saying that the American is worse off. Whether he is or not is a grander question, that involves balancing his training, his self-reliance, his executive capacity, his adjustment to American conditions, and what not, against corresponding elements in his European fellows. But whatever the inferiority of the American is, it is largely determined by the time our three young men take their leave of their respective fitting schools. In other words, France and Germany make more out of their secondary schools than we do.

The chart reveals another significant fact. France and Germany recognize three grades of education, — primary, secondary, and university. In the United States, we have four grades, — primary (including grammar), secondary, college, and university. That is, we have a system of colleges interpolated between the preparatory schools and the universities. France and Germany have nothing corresponding to these colleges.

Logically, there are but three grand divisions of education when we think of it by ascending steps, — that which is essential, that which is liberal, and that which is special. These divisions are strictly recognized in the public systems of France and Germany. The American college, when we aim to give it a logical place, baffles classification. Does it hold its students down to prescribed courses in continuation of the work below? It is doing secondary work. Does it give its students a wide range of high themes and a free choice? It is doing one sort of university work, such as is done, for example, under the faculty of philosophy in a German university. The American college, however, does not divide its subjects of study into four or more groups, with law subjects in one group, medical in another, divinity in a third, and the numerous branches of liberal learning in a fourth, with each group subject to its own faculty, each group as dignified as any other, and each group as stringently buttressed by admission and graduation requirements as any other. Consequently, no American college can be regarded as a full university in the European sense.

It is this partial, uncertain, shifting relation of the colleges to university work on the one hand, and to secondary work on the other, that is at the bottom of the ferment over the age of admission to college.

Were the law, the medical, and the theological courses of the United States coördinate with those that lead to the degree of bachelor of arts; that is, were they on the same level with us as in France and Germany, separated one from another by vertical boundaries, reached at the same age, and regarded as of equal rank and dignity, we should hear nothing about reducing the age of admission. There would be no demand that the doctor, the lawyer, the theologian, should first take the degree of the philosopher. He might, indeed, do so, but, if he did not, there would be no loss of caste, no inferiority of standing. Under whatever faculty he might work, he would still be a member of the university, with all the privileges and honors that membership involves.

But liberal thought in America holds the theory that our professional schools have their normal place above the college, that the true boundaries between them are not vertical, but horizontal, and that the proper avenue of approach to them is the four years' college course. Large numbers take this avenue to the professional schools. Consequently, for them we have this prolonged curriculum of twenty years. An increasing number of students are cutting it short by stepping around or over the colleges. And this summary curtailment of the twenty years' curriculum is invited by the fact that, although the professional school is held to be above the college, it is, in ease of admission requirements, below the college.

In short, there are two routes to the professional school, — one from the high school directly, and the other from the college. The latter is the one to be encouraged, and, therefore, it is urged, it needs to be shortened. Attempts to shorten the route through Harvard College have thus far failed. Naturally the question comes up, May not a year be saved somewhere below the college? It should not be forgotten that getting into college, and, therefore, into the law school, a year earlier means getting into the law school directly from the high school a year earlier. Then, too, it should not escape attention that if our secondary schools could be raised to the grade and efficiency of the lycée or the gymnasium, their graduates, like those of the lycée and gymnasium, would be qualified to enter the professional schools at once, thus saving four years at a single stroke and solving the problem that vexes us. Our American conditions, however, make this high grade and efficiency hopeless. Our colleges are needed, therefore, to extend and round out the work of the secondary schools, to open vistas in the higher education, and to give ampler preparation for that professional work whose true American place is held to be above the college.

Now if there is any way so to change our programmes and enrich our methods as to let pupils of good capacity enter college a year earlier without lowering the present standards of admission, it would doubtless encourage more persons to seek a higher grade of preparation for professional work. It would also favor the taking of post-graduate courses and so contribute to a higher culture. Our secondary schools, however, have all they can do. They give but four years, in a few cases six, to subjects that the gymnasium spends nine upon and the lycée ten. Their policy is clearly to improve the quality of their instruction and to get more time for it somehow, somewhere, if it can be found, not to reduce the time; or, if increased time cannot be obtained, to transfer such parts of their work as may also be suitable for those who do not ascend higher than the grammar school, to the upper classes of the grammar school. If it is practicable to save a year below the college, it must come out of the extended time of the high school or the enriched curriculum of the grammar school.

Thus we have before us two alternatives, each with two sub-alternatives, namely: —

I. The extension of the high school curriculum downward, with or without lowering the age of admission to college.

II. The enrichment of the grammar school curriculum by secondary subjects, with or without lowering the age of admission to the high school, and, consequently, to college.

In discussing these propositions, it will help us to note what the French and Germans have done for secondary education. The right hand section of the chart presents the lengths and relations of courses in the German system. There are the people's schools which children may attend from six until fifteen. Secondary education begins early, at ten usually, but sometimes at nine. If the pupil goes through the common school, and then becomes fired with an ambition to enter the university, he is sadly, almost fatally, handicapped. He must start early or not at all. He may reach the university through a *realschule*, but in that case he is debarred from certain university courses. Law and medicine, for examples, he cannot study. He becomes a university man of inferior rank. The gymnasium is the correct route, the highway to the German's intellectual paradise. Its pupils are "naturally selected." They are under the ablest of teachers. They are pushed remorselessly. Failure to graduate, when one tries, is a life-long disgrace. Successful study means access to the university, civil preferment, a professional career, — in short, being somebody. Moreover, it exempts largely from military service. It is the tremendous pressure of the government and of the social organization that makes the gymnasium what it is. The system yields wonderful students. Germany is a nation of explorers in the by-ways and abysses of knowledge. The gymnasium as it is, is possible only under a strong central authority that overrides local currents of dissent as a giant Cunarder the waves that dash against it.

But before we draw lessons from the gymnasium, it becomes us to note the curious fact that, while Americans are worshipping this much praised institution to an extent that lays them open to the charge of being Germanized, there is in Germany a deep, sullen, growing undercurrent of antagonism, with surface ebullitions here and there, to old gymnasial ideals, — a spirit of unrest that is exposing those who exhibit it to the charge of being Americanized. Over here we are longing for something like German thoroughness; over there, they are longing for our freedom, our flexibility, our deeper respect for the relations our schools should hold to the needs of pupils and to the possibilities of life. And the leader of the assault to-day on the old standards of the gymnasium is the German emperor himself.

"The philologians," he says, "are enthroned in the gymnasium to-day. They lay chief stress on the subject-matter, on learning and knowing, not on the formation of character and the needs of the life of to-day."

"Its pupils are overworked," say others; "they become listless in the upper classes in consequence; three fourths of them have become near-sighted; there is too much of the mediæval in gymnasium courses, too little of the modern; six years of Greek is excessive, nine years of Latin, preposterous; the mother tongue is neglected; there is an over-crowding of the learned professions; there is an over-production, not of suitably educated men, for that is impossible, but of conventionally educated men;" and so on through a long list of animadversions.

It is certain that thousands fall by the wayside; failure in study has a place even among the noticeable causes of suicide. What of it? Thousands succeed. The victors shed a pitying tear or two over their fallen comrades and praise the campaign whose vicissitudes they have survived.

The grander time features of the French educational system are graphically represented in the left hand section of the chart.

Compulsory study is required from six until thirteen; it may be given in a public school, in a private school, or, under stringent supervision, even at home. The vast majority of French children, four or five millions of them, take what is called the elementary primary education, which extends through the compulsory years. It corresponds very nearly to our primary and grammar education. It may continue two years beyond the compulsory age. If in the same school, under the old management, it is called complementary primary education; if in a different school, under a new management, it is called superior primary education; or the child may pass to what is called an apprentice school.

Secondary education is given in the lycée and the communal college, which are public, and in the private fitting school. The course of study and the daily programme of the private school are subject to government approval. The university sets the standards for its degrees, conducts the examinations, and, by its rigorous exactions, holds the private school up to a high mark or reveals its inefficiency.

The lycée and the communal college have courses that are substantially parallel, except that those of the former are complete, while those of the latter are frequently incomplete. The former is supported by the state; the latter, by the commune, although the expenses of both are partially met by the payment of board or tuition, or both. They are public schools, but not free. The elementary primary schools are public and free. The lycée has teachers of higher attainments and rank than those of the communal college, is more fully and thoroughly organized, is distinctly conscious of its superiority, and should be taken as the typical preparatory school of the French system.

Its classes are numbered from the eighth to the second inclusive. What we should expect to call the first class goes by the singular name of *rhetoric;* and the one above that, the highest of all, by the name of *philosophy*. There is a class below the eighth known as the preparatory. Thus in the lycée proper there are ten grades. Pupils may enter the preparatory class as early as eight. In this class a modern language is begun, either German or English. This marks the beginning of the differentiation between secondary and primary work. Under the French system pupils who are designed for the university must begin their preparation early. If they go through the primary schools, and then, at the age of thirteen or fifteen, awake with an ambition to enter the university, they are heavily, if not fatally, handicapped, just as in Germany. They must either go back to the lower grades of the lycée or, if that is not possible, under private tutors or as best they can, make up enough work to join a lycée class nearer their own age. Pupils enter the preparatory class of the lycée after they have been in the primary schools two years. They may stay a little longer in the primary schools before entering the lycée, in which case they do not reach the university so early. Frequently the lycée has elementary classes below its preparatory so that a pupil may enter the lycée as early even as five. The examinations for promotion are stringent. There is every incentive to work hard, — social, political, professional advancement, to say nothing of exemption from years of military service. Sometimes fifty per cent of those examined for a degree fail to pass the examinations. A lycée student told me that he once knew eighty per cent of a class to fail of advancement.

Under a new organization that goes into effect this year, all the lycée students move forward together, pursuing the same studies, until *philosophy* is reached, when there is a threefold division of the course, leading to the three separate degrees of letters and philosophy, letters and mathematics, letters and science respectively.

I assume an acquaintance with the United States system as revealed in our leading New England cities.

Now what does a comparative view of these three great systems reveal?

In the first place, there is full agreement that elementary education should last eight years and end at about fourteen. Nothing can be gained by disturbing the number of our nine grades. It is worth much that this number has the sanction of three great nations.

Some of our communities have but eight grades. The superintendent of the Newton schools has recently recommended a reduction from nine to eight. I have no doubt that, with better teachers, methods, and arrangements of subjects, as good work can be done in eight grades as now in nine. But I greatly misjudge the American spirit if it does not prefer better work in nine grades to equally good in eight. The reduction to eight grades might, indeed, lower the age of admission to college; but there is a grander question involved in the matter, and that is the welfare of the vast majority of American youth whose training stops with the grammar school. Will it help them or hurt them to reduce the length of their schooling?

In the next place, it is an established principle abroad that secondary education shall begin as early as eight or nine. Here we diverge from foreign practice. Our high schools rest upon the ninth grade. The Boston Latin school dips down to the sixth grade for its pupils; the Roxbury Latin school, not quite so far, but near enough to class it with the Boston Latin school as types of the only institutions among us that realize, in a subdued way, this dipping feature of the gymnasium and the lycée.

The striking contrast between our four years of secondary work, six years at the most, and the nine and ten years respectively of the Germans and the French ought not to be passed over lightly.

This difference is the unavoidable consequence of the American theory which contemplates the possibility of every boy's entering college or the university. The boy may stop when he passes out of the grammar school, but it is indispensable that there shall be a chance for him to keep on. Telling him that the grammar school is for him and the masses that have no future is un-American. Telling him he must choose secondary work in infancy or forego it forever is un-American. Barring him out from gratifying a high ambition of tardy awakening is un-American.

These statements do not beg the question. They are assertions of the obvious fact that the American scheme, amorphous as it is, welcomes the enlargement of horizons, the birth of aspirations, the forming of high purposes, and therefore places its secondary schools, not so low down that only the foreordained are likely to enter them, but where they may receive the developed products of the whole elementary system. That is, it places them on top. It is not the best place for prolonged secondary work, and, therefore, not the best place for French or German depth and thoroughness, but it is a good democratic place. And it is because the secondary schools are on top, and so are compelled to have curricula of three and four years for subjects some of which seem to require nine and ten, that the three hundred colleges of the United States are not superfluous institutions. The chief reason why preparatory schools abroad reach so low down for their pupils is the supposed necessity of giving prolonged attention to classical subjects, — nine years to Latin, for instance, and six to Greek. It would be an imposition, a waste, to force such prolonged and special study upon all school children, and yet such work, it is thought, must begin early; — hence separate schools where such work may be begun at from eight to eleven years of age.

But suppose that, in balancing the subjects and apportioning the times for a curriculum, it should appear that only four years ought to be given to Latin instead of nine, that only two or three years or, for many schools, none at all should be given to Greek, instead of six, and, finally, that the remaining subjects of a secondary course are suitable also for a general or common school course, then what becomes of the argument for making special preparatory work begin low down and in a separate school?

The Boston and Roxbury Latin schools in their long courses and early admission age reflect old-time and foreign sentiment, not the modern American drift, and it would break the heart of conservatism to have them otherwise; but the great majority of our preparatory schools begin where the grammar schools end. We may confidently conclude that the placing of our secondary schools at the summit of elementary education is the logical outcome from American and modern conditions, — conditions that, in their grander features, it is neither desirable nor possible to change.

Since our secondary schools are at the summit, it is important that the training of the grammar school shall be complete in itself, and also a suitable preliminary to the schools above; and it is equally important that all high schools shall have courses satisfactory, not only to those that go no higher, but also to those that wish to enter college. And here I wish to emphasize a serious defect in our educational relations, a sharp and unfortunate difference of opinion and practice, a condition hurtful alike to the great majority of our high schools and to the colleges, a condition whose origin was natural enough, but whose continued existence is without a shadow of good reason. That anomaly I bring out graphically by means of this black bar.* It symbolizes the bad break that occurs between the ordinary high school and the college. The classical courses in the best-equipped high schools do, indeed, close the gap so far as the few pupils who take those courses are concerned. But the great majority of pupils in the two hundred and fifty high schools of Massachusetts are pursuing a course of study that was not framed with the college in view and so does not connect with it. So far as collegiate education is concerned, the high school for such pupils is a *cul-de-sac*, leading nowhere.

There it stands, — this course of study, — the expression of the people's will and the desire of nearly all who aim to go through the high school. For those that go no higher, it is superior to the college preparatory course. During my teaching I have signed in round numbers a thousand diplomas, nine hundred of them for pupils against whom the college doors have been coldly shut. They knew nothing of Greek. It would have required from one to three years' additional work to meet the demands of the college; that was frost enough to nip any delicate, tardy bud of college aspiration. Now and then a college condescended to receive such pupils. It was heresy to do so, and therefore some other degree than that of A. B. was awarded to distinguish its recipient from the family of the elect. Harvard College, with a spirit of liberality to be commended and imitated, welcomes full and honorable connection with all good high schools. It has provided avenues by which they may one of these days hope to prepare pupils without Greek. Unfortunately, it is more difficult to prepare pupils for Harvard without Greek than with it. The greater demand, too, is made of those less able to meet it. Harvard College has made a mistake in exacting so much at the outset. The gap has been reduced, indeed, by her action, but it still exists.

It stands to reason — I am glad to note that the president of Harvard University has strongly affirmed it, and more recently the president of the new Leland Stanford University of California — that a training suited to a person whose course must cease after four years in the high school ought to be worth following up in the college, should the high school graduate change his mind and desire to go higher. Says President Jordan, " The work of the secondary

* See diagram.

schools has long been distracted between the needs of the students preparing for college and those preparing to enter on active life. Neither of these wants is yet fairly met by the most of the secondary schools, and in a normal condition of things the two should be identical. * * * * What the university really wants is to have students trained to see and to think; 'practical' life requires the same, and when this demand is really met, the university work and the work of life will each rest on a sound foundation."

I urge most strongly, therefore, the connection of the college with the public school system all along the upper line, not simply at those favored points where the classically trained touch the college. This would reduce the age of admission for many a belated pupil. A classmate of mine who entered college at twenty-seven instead of at eighteen, raised the average age of the class nearly three months. It should not be overlooked that neither the average age nor the real age of the *rest* of the class was affected in the slightest by this venerable pupil. No increase in average age brought about in this way is of the slightest concern to anybody except to those belated students that cause it. What a stimulus to our two hundred and fifty Massachusetts high schools it would be if all their pupils could be made to feel that they are on the highway to college, that it is in their power at the end of the course to enjoy the honor of passing the college examinations even if debarred from the privilege of becoming college students.

This connection once established, the demand for improving work should be steadily pressed until the teaching of English, of the sciences, of the modern languages, becomes as thorough as that of Latin and Greek.

This connection once established, a certain anomaly or absurdity would disappear. Who would have dreamed, in advance of knowledge of this absurdity, that sensible men were capable, first, of raising barriers between the high school and the college; secondly, of banishing them between the high school and the professional school, and then, thirdly, of seriously wondering why our youth so numerously skip the college to enter the professional school? And in justice it must be said that such inconsistencies cannot be laid at the door of any single group of men; they are the unfortunate consequences of independent groups working at cross-purposes, — consequences easy enough under the intense localism of our American educational systems, but wholly impossible under the strong central authority of France or Germany.

Now if it is a matter for regret that students who enter college directly from the secondary school do not complete their professional studies before they are twenty-six or twenty-seven, then it is a matter for greater regret that, if any of the vast majority of those who pursue full high school but non-collegiate courses aspire to go through college on their way to a profession, they cannot hope to finish their preparation before they are twenty-eight or twenty-nine.

If the route to the law school that skips the college needs to be discouraged, why make it a route of so little resistance? If the route to the law school that leads through the college needs to be encouraged, why make it a route of so great resistance?

If it is desirable to keep *both* routes open, then it is a more pressing duty to lengthen and stiffen the secondary courses for the benefit of those that take the short route, than to shorten (and very probably) weaken them, for the benefit of those that take the long route. Granted all the hardships of the long route, there is the immense advantage of higher attainment and culture at the end of it, while in any weakening of the short route its greater disadvantages are aggravated.

If pupils enter the primary school at six and move along regularly through the grammar school and the high, they will be ready for college at nineteen. This is young enough — too young, I am disposed to think — for those who go directly to the professional schools. I think it is young enough also for persons of average capacity to enter college. There are exceptionally quick and strong minds that might enter college a year or two earlier with profit. For such persons the way should be shortened, but not by contracting the whole school system; and it should be shortened not solely for the purpose of saving a year or two in time, but for the purpose of keeping bright minds sufficiently busy. It is a serious matter for a mind to grow indolent or rusty through lack of employment.

We have been led, perhaps, to think that school children are graded by capacity and attainments, and to some extent they are; but they are largely, if not chiefly, graded by opportunities enjoyed. I may convey my meaning better by saying that I should prefer to take my chances, in teaching astronomy, with selected bright pupils from the ninth grade of a grammar school rather than with selected dull ones from the senior class of a high school. Nobody in business or intellectual life assumes that because A has worked longer or on more subjects than B, he is therefore the abler or the better equipped. He has simply enjoyed better opportunities.

School children range in capacity from the feeble-minded to the genius, and in rapidity of development from the stunted bud that no forcing can open to the flower full blown before its time. These differences are recognized in the modest standards set for promotion, in the failure of the extremely slow to keep up with their classmates, and should be recognized further by facilitating the progress of the bright, by permitting them to do in eight or in seven years what the system regularly allots to nine.

In this connection, let me allude to an experiment that is trying in the Harvard grammar school of this city. Some thirty or forty of the abler children of the eighth grade are attempting this year the work of their own grade and that of the ninth above them. If they succeed, they will enter the high school a year earlier than otherwise. In the Harvard school this experiment extends to the pupils of the fourth, sixth, and eighth grades. Theoretically, it is possible by this plan to save three years in the grammar school; that is, to reduce the grammar school period by one-half. This would be too violent a contraction. One year, or, at the most, two, is all that apt scholars can afford to save in this way. In a large school in which the pupils of a single grade may be divided into two or three sections, each under its own teacher, this method involves no increased expense; in a small school, it would cause added expense if carried out efficiently. The chief objection to the method is that the saving of a year is effected in a single year instead of being spread out over several years. The ideal way for reducing the time of the more capable is one that will permit the condensation of six years' work into five or four rather than the condensation of two years' work into one; just as in the Cambridge Latin school the five years' course is taken by many pupils in four years.

And even in the case of the promising, it is a serious question whether it is not better to devise a method of keeping them at work up to their capacity rather than a method of reducing their time.

The time, it seems to me, has come to consider the wisdom of increasing the range and the grade of scholarship within the present limits of the grammar schools. When we note how much the boys of the gymnasium and the lycée have accomplished by the time they reach fifteen, the question comes to us with great force whether our grammar school boys and girls are working with sufficient seriousness and on a range of subjects sufficiently liberal. We do not expect them, we ought not to expect them, to accomplish as much as those of the same age in the foreign schools. Our English language is an exceptionally difficult language to conquer; we might save a year's schooling if our arithmetic were simplified by the general adoption of the metric system; our school sessions are shorter, our vacations longer; we have but little more than half as many exercises a week; our pupils work in larger classes and receive less individual attention; they have more sports and more society; they are less docile and under a milder sway. These conditions should keep us temperate in our suggestions of possible improvement.

The old idea that elementary education should be confined to the three R's is exploded. That answered well enough for a community struggling out of illiteracy. The better conception is that education should be harmonic, as the philosphers say. Its fundamental note should be struck early. That note, with those increasing and subtler overtones and accessories that give it an ever improving quality, should be heard in the higher stages. Or to use another figure, education should consist of concentric circles, — that of the elementary schools being a small circle including in a simple and limited way the entire range of conventional knowledge, — language, science, mathematics, history, literature, nature, government, morals; that of the high schools, the same circle enlarged; that of the university, this circle pushed to remote limits, so that the individual cannot hope to reach its circumference except along some chosen arc. Thus the grammar school graduate will have something in his training approaching roundness, if it is not very grand. This seems to be the German idea and the French as well. I think the course of study for the Boston schools recognizes this principle. Such a course ably administered — everything turns at last on the teaching — seems a wise one for those who stop with the grammar school, to say nothing of its value for those who advance beyond.

It seems to me that the arithmetic course might be reduced enough to make room for algebra and geometry. Algebra might be carried through equations of the first degree. Certain things in arithmetic are better taught and better understood through the medium of algebra. Geometry should be taught in a way to test the inventive and reasoning faculties, but with full recognition of the fact that its principles may be grasped for practical purposes long before it is possible for the average pupil to give the rigorous and formal demonstrations of Euclid.

I should certainly provide for enough work in elementary science and in natural history to open the eyes of pupils to what there is about them. There is something seriously defective in our teaching if under it pupils do not gain in power to see and to think, if they do not learn to trust a fact in nature as observed by them with some share of the confidence which they place in a teacher or in a book.

"I want you to see my pretty diatoms," said a young lady to me once; and she made me sit down at her compound microscope and examine her beautiful specimens. The young lady was not five years old, but she was seemingly as much at home with her diatoms, desmids, and microscope as with her dollies. What a help to the upper schools, what a boon to the children if they never enter the upper schools, it would be if something like the germ of an observing, critical, scientific spirit could be early developed! Foreign common schools do something in this direction. The Boston schools aim to do something also. Why may not our schools in general have an ideal of this sort?

It seems to me that there is room for improvement in teaching geography, particularly in the direction of making it an observational study. If the city of Cambridge, for instance, should organize a circulating library of photographs and stereopticon views properly classified for showing mountains, hills, rivers, falls, trees, animals, natural scenery, cities, nationalities, and what not; if it should provide each building or, possibly, each room that has a sunny exposure, with a port-lumiere and means for darkening, the great world, in a very important and fascinating sense and with most gratifying results, might be brought into many a schoolroom. Or if the grammar school principals, encouraged by generous support from the city, should each devise a lecture or a brief course of lectures on geographical themes, no two taking the same, and if all the lectures by a system of exchanges should be given with stereopticon illustrations in the several school halls, properly darkened, what an impetus would be given to a subject naturally fascinating! We have heard much of university extension. Here is a promising field for a kind of grammar school extension.

I hesitate to suggest an additional language for the grammar schools. Latin would hardly be tolerated. I fear it would be difficult to convince the public, except in highly intelligent communities, that French or German ought to be taken up in our grammar schools, although it is the practice abroad to begin a modern language very early.

I hesitate also to say that the additions proposed — they would be substitutions to some extent — should be extensively tried at first.

Some single school, favorably placed in an advanced community, might be selected for the experiment.

I am aware that the changes suggested would require more teachers of a high range of attainments. It will be a glad day for the schools when the cultured young women of the colleges shall, after suitable normal training, seek grammar school positions as well as high school, and when the public shall demand as generous a preparation for teachers of the lower schools as for those of the upper. It is certain that the proportion of liberally educated young women is increasing, that the supply of such women for high school teachers will soon exceed the demand, and that the opportunity of the grammar schools for teachers of broader training and culture is close at hand.

If these suggestions for an enriched curriculum in the grammar schools do not bear directly on reducing the age of admission to college, they bear pretty directly on the quality of the preparation for college.

But I will not pursue the matter further. My principal conclusions are that our nine years of elementary instruction ought not to be abridged; that our secondary schools, under American conditions, ought not to dip down into the lower grades like those abroad; that our colleges should connect with the high school system all along the upper line, and so reduce the age of admission for many of the belated; that the high school course of four years will not bear reducing; that pupils who begin at six and move along normally reach college early enough; that the exceptionally bright among them may profitably reduce their time by a year or two; that communities should definitely plan for such reduction in worthy cases, or otherwise provide for the promising; that an enrichment of the grammar school curriculum is desirable and, in our more advanced communities, feasible; that the chief aim in preparatory work should be to improve quality within existing time limits rather than to attain the present levels of quality in reduced time limits; and, finally, that such improvement in quality is much needed by those who skip the college for the professional school, by that large number who close their schooling with the high school, by that other large number who go into business directly from the college, and, I make bold to add, not without compensating value to those who contemplate seven years of additional study in both the college and the professional school.

NATURAL SCIENCE AS A REQUISITE FOR ADMISSION TO COLLEGE.[*]

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As this general subject of Natural Science in Education has been so frequently discussed of late years in conventions similar to this, it may seem unwarranted to invite you to its farther consideration. But as one looks abroad over the educational field there are visible signs of such significance as may well arrest and hold our attention here. There are those forms of rapid growth, the manual training schools which have so recently appeared, and have already won for themselves an assured and permanent place in our system. One sees, too, the schools of technology, rapidly growing and strengthening, building themselves into intimate association with the so-called practical life of this age of steam and electricity, of chemistry and of bacteriology.

In the highest institutions we are seeing a strong and rapid development of true university work, the growth and aims of which have been so lucidly set forth by Professor Royce.

In the colleges we have witnessed a breaking away from the single course for all, and in its place we see electives, the group system, and scientific and literary courses. English has gained and modern languages are now securing a larger representation in school and college work. And now comes natural science with its numerous branches of vigorous growth, to take also an active part in this divine spirit of unrest whereby progress is made possible.

This is the reason, then, why it has been deemed desirable for us to turn our thought once again in this direction, — to help somewhat if we may, by observation, study, and impartial criticism, the educational movement of progression.

I take it to be my special function to-day to bring before you some of the various points at issue as a basis and introductory to the discussion that is to follow, and out of which we shall win, I trust, some of that further light and help that we are seeking. We are all aware of the petition that naturalists are supporting for a larger representation, in the curriculum, of the sciences they represent.

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[*] See page 453.

They hold that the disciplinary value is of the first order, as it requires observation and comparison of natural objects *without* the use of books, and leads on to processes of reasoning based on evidence from factors which are always new. For as no two objects are alike in nature each problem in natural science is, like every problem in daily human life, different from every other.

It would appear that this training is different in *kind* from that which has to do with books only; it develops another part of the brain, gives another kind of mental power. By way of illustration I may say that it has not infrequently occurred to professors of natural science to have under their instruction as undergraduates and also as graduates, men who had had none of these studies, and who seemed absolutely unable to do anything without a book. Moreover when given a book, I have known them to find to their entire satisfaction, in their specimen, every peculiarity described in the book, although not one of all those peculiarities existed; for a different species from the one described in the book had been given them for study.

Again, it is held that the mental habit, started and encouraged in science work, of having some definite working hypothesis to guide one's observations and reasonings, proves a great safe-guard through life against that frequent shipwreck which results from ill-chosen and fruitless labor. It is believed to be greatly to the highest good of every man to come so far into the knowledge of this work as to realize its absolute devotion to truth; to comprehend the value of having a reasonable basis for beliefs; of recognizing as one can so fully here, the universality of the great law of change, which lifts one above narrow dogmatism into a broad spirit of catholicity and toleration. It is daily more and more desirable that a college graduate should always, or usually, be found to hold intelligent views upon questions which a fair amount of science training would enable him to have; that, for example, he could be relied upon to understand sufficiently the matters of life and death importance to himself, his family, and his neighborhood, connected with water-supply, drainage and germ diseases. Each one would thus become a greater power for diminishing suffering and saving life in the community in which he lives. There are greatly needed men of such intelligence and breadth of view in every community; men who are not alone wise in the life of years ago, when the black death could not be prevented from sweeping away twenty-five million victims, but rather men who, in addition to that, know how to live and help others to live securely and wisely in the far more complicated life of to-day.

Let us turn now to the present condition of natural science in education, beginning with the work in college. It is the general experience of those who give this instruction that the majority of their students, by their many years of exclusive attention to other studies, have had their powers of observation and of imagination of physical phenomena greatly dulled and in some cases well nigh atrophied. It is claimed by those who have also taught in the schools that there is a marked difference in the receptivity for this work between an equal number of young school children and of college students; the difference being in favor of the children. The problem is still further complicated in some of the New England colleges where the professor of a natural science is obliged to meet from seventy to ninety men each year to give them instruction in an observational study without any observation. Such is the unhappy fate of more than one New England professor, and as these *are* observational studies the conditions are even more trying and unfortunate than if one were to have seventy to ninety beginners in a language, ancient or modern, for three hours a week.

Another important point for our consideration is the demand that college students are making for general instruction in special branches of many of these subjects. In biology for example, they are asking for work in bacteriology, in anthropology, and in that experimental physiology which will serve them as a basis for psychology. Their requests as they present them are well-nigh demands, and one can but feel that some readjustment is necessary where all these requests are left unheeded, and the student often has no chance to get even the rudiments of any natural science until after he enters college and is from seventeen to twenty years of age. In answer to the suggestion that these men may get what they want in these branches in post-graduate work at a university, they frequently reply that they cannot afford the money for that. It is true that fellowships are offered, but these are applied for and taken always by men of decidedly more advanced standing, frequently by men who have won a second degree and completed some original work. To meet this difficulty certain of the colleges are establishing fellowships; at Amherst, for example, several in physics, and at Williams one of $500 in biology. Within a few weeks one of the

New England university presidents said to me, "Are you not trespassing upon the field of true university work by establishing fellowships? Is it not best for each grade to keep to its own legitimate work and to have for its aim the bringing of that as near to perfection as possible?" But no competition with the university is intended, and it is possible that none exists. As I have said, it is to give a man an opportunity to go on with his work, who cannot yet gain a university fellowship, and lacks the funds needed to indulge unaided in another year of work. Naturally the number of men who can afford both collegiate and university training is smaller than of those who can afford the former only.

The college work in these lines is then in a greatly congested state. As seen by the reasons given, one is obliged in college to begin with the *rudiments*, and has to deal with men who have their mental habits quite firmly fixed. It follows then that the college graduates are not as well prepared for the university life as they should and might be; that the college work is of a lower standard than it ought to be. But in order to relieve the difficulty are the preparatory or secondary schools to be asked to find place for more work in science in their courses? Already they are heavily burdened with entrance requisites. They have been growing with the years; there is congestion there also, and I am inclined to believe for the same reason. That is, a lack in the preceding work. I believe it is possible to make much wiser use of the time from seven to the age of entering the secondary school, and, by maintaining continuity, to so evenly distribute the work throughout the entire course as will reduce or do away with congestion and abnormal friction at every point. Then shall we not be somewhat nearer to that natural state, where each grade in the entire educational system will have a better balanced curriculum, a more definite and possible task?

We may now look at the problem of ways and means; at the question, how can this be brought about? We are assured by the teachers in secondary schools that it is impossible to bring any natural science *generally* into the course preparatory to college so long as the colleges do not require it: — a point that every one will concede. Is it not here that the first step must be taken? If this requirement be made, then the secondary schools can justly require some elementary training in the primary, and that once established it will be possible to gradually adjust and improve the work at every point from the primary school to the university. It may be urged that this is expecting too much of the secondary schools; but I believe that it is a point worth considering. As is well known, there are some of the schools where good, scientific work in natural science is done, and more of it than can fairly be required in an entrance examination to college for a number of years to come. Indeed there is no little justification for the claim of a number of the schools that the colleges have failed to appreciate the work the schools are doing in these branches, much to the loss, they claim, of the college and of the men they graduate.

I have recently gained some information from the schools upon this subject which is worth giving here. Our Faculty having been asked to establish a natural science requisite for admission, a committee was appointed to consider and report upon the advisability of adopting the suggestion. That committee sent a circular letter to one hundred of the schools from which Williams College has received students in the last four years, asking them if they could prepare their students on the basis of a natural science requisite, by 1893 or later. Of the ninety answers received thirty-two are from Massachusetts, twenty-six are from New York, and the others are from all the other New England states, New Jersey, Pennsylvania, Ohio, Illinois, and Minnesota. I think it is a remarkable fact that every school replied that they could so prepare their pupils.

Again, of the ninety, nine answer yes, but object to the plan; the main objection being lack of time in the already busy course. Forty-five answer simply yes, and thirty-six add some word of approval; e. g., "this meets with our hearty approval," "we are decidedly in favor of this plan," "we believe this to be a step in the right direction," "decidedly a forward move," "we are surprised that the colleges have not taken this step before," etc.

I was surprised to see among the letters so much said by the teachers of Greek in favor of making natural science an alternative with Greek in the schools. Their expressions are the more significant in that they are entirely spontaneous, nothing of that nature having been suggested or solicited.

The head master of one of the large preparatory schools in Massachusetts writes as follows: —

"I should hail with delight a proposal to drop the Greek from the list of studies required for entrance to college, and I should welcome an equivalent requirement in science. We find Greek the great bugbear of our pupils, and, while I enjoyed it in the days when I was teaching it, more than any other study, I would gladly see it made optional with science. I suppose I am heterodox on the Greek question, but I find myself in a respectable and constantly increasing number."

He adds, "The courses of study preparatory to polytechnic schools are patronized here, at least, by nearly as many pupils as are in the college courses, and the current is setting in that direction very strongly all about us."

Judging from the number of letters which have urged this same view, and remembering, too, the similar position taken so strongly in England, it would seem not impossible that this change may be generally adopted, and the solving of our problem be greatly simplified and hastened.

There is one objection made to such an introduction of natural science, in regard to which I would say a word in closing. It is said that the instructors in college would be far from satisfied with the preparation which the students would have in science for some years. That would undoubtedly be so in many instances. But well trained men in science are being sent out from our colleges and universities in steadily increasing numbers; and with the greater experience of each year, the work could be steadily improved. I think the best answer to the objection is, how can good teachers and good teaching ever be obtained other than by development through experience? Good swimmers are made only in one way. They must be allowed to go into the water, and they will be awkward at first. But in their struggles, especially if attended with wise counsel, sympathetic interest and encouragement, lie our hopes, do they not, for a better order of things in the future?

The points I wish to offer, then, are these: —

1. The disciplinary value of these studies; the kind of brain growth and mental power they develop; the habit of wise choice of work, the spirit of devotion to truth, breadth of mind and toleration, and those influences which make for good which arise from the association with things that are absolutely pure and true.

2. There is a greatly overcrowded condition in the college work and an unfortunate condition of mind to deal with.

3. There is a lack of continuity between the college and the university.

4. There exists a congested state in the secondary schools.

5. There is evidence that these schools are able and ready to improve in this respect.

6. It is suggested that requiring more of the primary schools and establishing continuity in the work, may decidedly help the secondary schools.

7. This movement can be inaugurated by a general requirement on the part of the colleges of an entrance requisite in some branch of natural science.

8. It is believed that this will relieve the places where the great strain and crowding comes; that it will insure better work and broader training.

OFFICIAL REPORT OF THE SIXTH ANNUAL MEETING OF THE NEW ENGLAND ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS.

THE sixth annual meeting of the New England Association of Colleges and Preparatory Schools was held in Harvard Hall, at Harvard University, Cambridge, Mass., on Friday and Saturday, Oct. 16 and 17, 1891.

FRIDAY AFTERNOON.

The Association was called to order at 2.45 p. m., by the first Vice-President, Mr. John Tetlow, of the Girls' High and Latin Schools, Boston, who presided during the meeting in consequence of the absence of President Dwight abroad.

On motion of Mr. William F. Bradbury of the Cambridge Latin School, the Chairman appointed the following nominating committee to report on the next day a list of officers for the ensuing year: Mr. William F. Bradbury, Mrs. Alice Freeman Palmer, Dr. William F. Warren, Mr. M. Grant Daniell, and Pres. G. Stanley Hall.

Mr. Frank A. Hill, of the Cambridge English High School, then made an address, illustrated by a chart, on the subject, "The Practicability of Abridging the Course Preparatory for College."

The address held the close attention of the audience, and stimulated a most earnest discussion. See page 405.

The first speaker, by appointment, was President Charles W. Eliot, of Harvard University, who said: —

Mr. Hill referred to certain ideas in education as "un-American." I should hesitate very much to describe any educational ideas as un-American, for there is so large a variety of ideas in America, that it is not easy to single out one which does not prevail in some part of the country. Mr. Hill has spoken of the heavy black line on the diagram as marking what is in France and Germany a barrier to the advance of those whose course of study is represented by the area below it. I agree heartily that it is a real barrier in Europe, and in America also, because of the low grade of instruction in the grammar schools. However, Americans have found ways of getting over that barrier. Boston has seen that to get boys well prepared for college, it must have recourse to what Mr. Hill has described as the 'dipping down' process, and must take the boys out of the grammar schools before they graduate, sending them to special schools, such as the Roxbury and Boston Latin schools. In this way these rescued pupils practically shorten the grammar school course. The academies also dip down into the grammar grades. By the age of fourteen many boys begin preparation for college at academies. Again, American parents, by thousands, seeing the barrier which the grammar schools offer to their children's progress, send them to private schools conducted on broader principles.

All these ways of overcoming the barrier exist, they are all entirely American, and they are all increasingly used. When I was to be fitted for college, I was sent to the Boston Latin school, as a matter of course, because it was the best school in the city. Now there are several private schools in Boston which give as good a preparation as the Boston Latin school. Private schools are supported by parents who find the grammar schools intolerable for their children. We must look at the facts without much regard to social or political theory. The Americans are a practical people, and American parents are going straight to their mark, — the best education of their children, — whether they send them to the public schools or not. Of the students who enter Harvard, two-thirds come through other channels than the public schools. Where is the trouble? We college men are intensely interested in the public school system. Where does the difficulty lie? in what part of the course? It lies in those nine grades of the grammar schools. The trouble is not in the schools above them, — they do their work well considering the material they have to work upon. But the schools which "dip down" do better work than those which do not, and we can, like France and Germany, begin this selection even earlier than we do now. That is one solution of the problem. Abroad the "dipping down" process is part of the school system. We can imitate them. We can, under an organized public school system, take out of the grammar schools the boys whose education is to be prolonged, and give them a different training. There are only two ways in which the American boy can be sent to college better prepared than he is now, and with less waste of time; — either by an organized " dipping down " system, or by improving the grammar schools. The former method accomplishes its direct aim; but if we accomplish that same end by improving the grammar schools, two advantages will be gained. First, the high school will be enabled to do better work, because it will be fed by better material; and secondly, the educational opportunities of those who do not advance beyond the grammar school — and these are the great majority — will have been improved. I have sometimes felt that the needed improvement in the grammar schools could not be brought about; but I have recently been much encouraged by the interest shown in the subject by some grammar school teachers and superintendents. I consider this question of the improvement of the grammar school as the most important educational question to-day before the American people.

Why do France and Germany begin the work of what we call high schools at eight or nine years of age? Because they wish to give their children the opportunity of beginning the study of languages at the age when they may best be learned. There is no resisting or denying the necessity of beginning this study at nine or ten. We are in the dark ages regarding this matter in America. I call to mind the case of one of the best universities of this country where the student may not begin the study of German till he is in his junior year. When I was a student at Harvard, I could not begin French till my sophomore year, or German till my junior year. This is an intolerable condition of things. If we cannot improve the condition of the grammar schools in this respect, then we must like the French and Germans, " dip down." In America there is no thought of beginning geometry before the pupil is sixteen. In France and Germany they begin geometry at ten, and in its right place, namely, in connection with drawing. The question is, can we get geometry, French, and German, into the grammar grades? If not, then we must have a systematic dipping down into those grades for the boys who go to college. Are there more than these two alternatives? I believe that algebra, geometry, and a foreign language must go into the grammar schools. As for science, that should begin even before the grammar grade, — in the primary school; I had almost said in the kindergarten. The best kindergartens are already laying a good foundation for real science teaching in the grammar schools.

We college men want to hear from the preparatory and high school teachers in this matter; we want their co-operation. So long as high schools and academies require nothing for admission which a child of eight or nine ought not to have attained, little can be done towards lifting the standard of the grammar schools. The superior school sets the standard for the lower. In looking over the admission requirements at Phillips Exeter Academy, I find nothing that a child of nine should not be able to do, — yet sixteen is the average age of admission to that academy. The Phillips Academy at Andover has no requirements for admission.*

Ladies and gentlemen, I would not imply that all the fault is with the high schools or with the grammar schools. The colleges and universities have undoubtedly been remiss in maintaining their own standards of admission. Among other causes for the trouble we are trying to remedy, is the low standard for admission to scientific and technical schools. The technical schools are demoralizing to the secondary schools. They place their requirements for admission far below the standard proper for the age of eighteen. The openness of all professional schools is another great defect. Here at Harvard we have bettered matters in this regard; and our own professional schools are in a measure protected; but they do not yet demand nearly as much for admission as does Harvard College. Now this is an extraordinary eccentricity. There is no proper barrier here between the professional and the elementary schools, as there is in France and Germany. We do not say that there are no imperfections at other points in our system, but the main defect is undoubtedly in the grammar grade; and this should therefore be made the object of vigorous and incessant attack.

Mr. John Tetlow, calling President Seelye, of Smith College, to the chair, took the floor and spoke as follows: —

President Eliot has asked for an expression of opinion by the heads of secondary schools. The head of such a school might, perhaps, be expected to dissent from the views he has expressed; but I find nothing in them to dissent from. On the contrary, I endorse them and this on the ground not only of theory but of practical experience. I have charge of a Latin school and a high school. The Latin school "dips down"; the high school does not.

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* President Eliot was subsequently informed at the meeting that the Phillips Academy at Andover had announced in June, 1891, certain requirements for admission, and had since enforced them by regular examinations. This is a great gain, although the requirements are by no means severe.

Every year we admit to the Latin school, grammar school graduates and pupils from the third class in about equal numbers. Girls thus entering the Latin school from the third class of the grammar school at twelve years of age will complete the course in six years. Of the grammar school graduates who enter at fifteen, even with special efforts to aid them, only one-fourth or one-third succeed in completing the course in four years; the rest take a fifth year. They have apparently nothing in the way of increased mental culture to show for their prolonged preparatory course, and they have lost from one to two years in time. I suppose Dr. Merrill can give similar testimony.

I have a suggestion to President Eliot as to a contribution he can make to this enrichment of the grammar grades. The suggestion of Mr. Hill, that objective geometry, algebra to equations of the first degree, and a foreign language, as French, be put into the grammar school course, is entirely practicable. As for the foreign language, the advantages of the change are obvious. When the vocal organs are plastic, then is the time to begin the study of a modern foreign language. Secondary school pupils are too self-conscious to succeed in pronouncing French with delicacy and exactness, for French is to them a "funny way of speaking"; hence they hesitate to converse. Moreover, there would be a positive gain to the pupil's English. At present, owing to differences of nomenclature, the scholar is puzzled by the rules of English, French, and Latin grammars. But much of what is commonly included under English grammar — not all, of course — could well be taught through the foreign tongue by the method of incidental comparison. The important parts of what is distinctively English may be better taught in another way.

Inasmuch as the Anglo-Saxon way of reform is through long and patient experiment rather than by authoritative command, as in France and Germany, my suggestion to President Eliot is that he get himself and two or three friends who hold the same opinions elected to the Cambridge school committee; that they give official expression to their views, and ask permission to try the experiment in some grammar school. Let it be announced that parents who choose may send their children to a school where arithmetic will be limited to thorough and accurate work in the four fundamental operations, and the departments which are introductory to, or serviceable in, the higher mathematical or scientific studies; where geography will be confined within moderate limits, and where elementary algebra, objective geometry, and French will be taught; let it be added that a confident hope is indulged that some part of secondary work can be anticipated. And so let the results of the experiment appear.

Is this quixotic? No. Remember the experience of Charles Francis Adams at Quincy. The reforms popularly known as "The Quincy System," were carefully worked out, then made known to the public, and finally generally adopted. Something like what I have suggested has been done for natural science in the Middletown high school through the agency of Professor Rice, who is, as I am informed, a member of the local school committee. How can the reform better be accomplished than by experiment? Who can more safely be trusted to conduct the experiment than the man who believes in the reform?

Dr. Moses Merrill, Headmaster of the Public Latin School, Boston, said: —

At Andover, forty years ago, there was but one course of study for a complete or "liberal" education. I remember that if we ever complained that any study seemed especially hard or distasteful, or that we failed to grasp it readily, our teacher, Principal Taylor, would reply: "Then that is the very thing you ought to do." Times have changed. In my school, if I find a pupil does not like a study, if after a trial he seems to me to have no aptitude for it, I seek an early interview with the parents and try to persuade them to change the boy's course of study. All pupils are not adapted to the same studies. I endorse heartily all that Mr. Hill, Mr. Eliot, and Mr. Tetlow have said; yet we forget to consider what it imposes on the child. What is Boston at present trying to do in her schools? I cannot recall it all — there is so much. Manual training of all kinds, gymnastics, outdoors and in, — all these things are being introduced into the schools. I believe that they have a place there, and that it is going to be a larger place. Yet now we four come forward and say, we must put French, science, algebra, geometry, into these same schools, and moreover get the pupils through them at an earlier age. I do not think this can be done. The only thing we can do is to decide very early what course a child is to pursue and have his studies look to that end. Then the grammar school course might be finished at twelve or thirteen. I am in entire sympathy with the idea of sending pupils to college earlier, but how can it be done under our present system? I could do it if I had despotic power. I should go to every grammar school master and tell him to announce in his school that all who were intending to go to college would be put ahead as fast as possible, and at eleven and a half or twelve would be sent to a classical school. It can be done in that way, but in no other.

It seems to me of great importance that the college should not be dropped out of our system, leaving nothing between the high school and the university. When students come to me asking whether they shall go directly into a professional school, into business, or elsewhere, I tell them *all* to go to college. But under the present system, I do not see how boys can be got to college any earlier. We have seen the need, we have tried to meet it, to get them ready faster; but we cannot do it. The only way in which it *can* be done is by deciding earlier what course a boy is to pursue and keeping him to that.

President L. Clark Seelye, of Smith College, after Mr. Tetlow had resumed the chair, spoke as follows: —

I heartily endorse what has been said about the necessity of reducing the age of admission to college. I favor, also, the suggestion that the place to begin to do this is in the grammar school. We may very properly shorten the time spent there. I was recently present at an examination in a certain grammar school. The pupils told off very glibly the names of all the towns in Louisiana. When they finished, the superintendent complimented them on doing so well, and turning to me, said: "During the War of the Rebellion if we had known what these pupils know, we would not have had to turn to our atlases to find out where the Battle of the Wilderness was fought."

Now pupils gain nothing from knowing the names of all the small towns in any state. Much of the time given to work of that sort can be better given to algebra, geometry, and French. How many of us, noting the problems our children bring home from school, have felt the annoyance of seeing them spend two hours over a problem which could be solved in half an hour by algebra. Twice as much time as should be is given in the grammar school to arithmetic; four times as much to geography; four times as much to various subordinate studies. The studies should have direct relation with one another; they should be organic. The memory is best trained by what is worth remembering; the perception by what is worth perceiving. The work of the schools should be progressive, each study having reference to what lies beyond. What we want to gain is economy of force in the lower grades. We may help toward that end if this association as a body to-day insists that superintendents all over the country shall revise the system of grammar schools. I am glad President Eliot by his efforts has brought this matter before the attention of the colleges. The colleges as well as the preparatory schools are concerned in it. The trouble lies here. Requirements for admission to college have been increased, and one or two years more of preparation are needed than was the case thirty years ago. The college is thus forcing more work on the preparatory school, yet no increase has been made in the work of the grammar school. There is urgent need that the course of study in this country be made of shorter duration. Not only should boys come to college earlier, but their college work should be made part of the university work; either this, or the requirements for a degree will need to be lowered. It is contrary to the nature of things to require twenty-eight years of preparation before a young man or woman can earn a penny. We must have different lines of work, different courses, which must all receive equal recognition in the colleges. The work of preparation can then be simplified and pupils can be brought earlier to college, where their college work can fall in line with, and become part of, their professional training.

There are, then, in our present system two causes for the difficulties which present themselves: first, the colleges by demanding more for admission are putting more work upon the secondary schools; and second, the grammar schools are doing nothing toward economizing time and concentrating their forces to help the high schools meet this increasing demand.

President G. Stanley Hall, of Clark University, was the next speaker. He said; —

We are all very grateful to Mr. Hill for his paper and for the graphic illustration on the chart of the points he has made. When I compare the American boy with the French or German boy of the same age, I realize distinctly the loss there is in the American system of education. The American boy is far the stronger and able to do *more* work, not less, than the French or German boy. He is stronger, larger, he comes out of school with a shout; he is all eager for games, ever alert. The point on which all anthropologists strongly insist is that the earlier periods are those when the mind is most receptive. There is every reason why our pupils should come to college earlier than they do. The loss in time and in attainment, I believe, is due to inferior teaching — to the inferior methods of training teachers. Who that has watched the work in class-rooms, say in the study of languages, has not noted the wide difference between trained and untrained teaching? Consider for a moment the material from which the teaching force of the grammar schools is recruited, — from young women just out of the high school. Consider, also, the fact that the average length of the teaching life of grammar school teachers is but three years; and this last is a most significant fact. We have in America to learn that teaching is not giving instruction; it is not seeing that a pupil memorizes so many facts; it is *working with the student.* This is true in all grades of the work, from the primary school to the university. In all our schools one marked difference from foreign schools is that our teachers cannot hold the class, do not inspire them, lift them, as they do abroad. For one thing, our normal schools are, to an extreme, inefficient. There has recently been an awakening to this fact, yet they still constitute one of the weakest points in our whole system. In foreign systems, the normal schools are one of the strongest points. Furthermore, in this country, only one teacher in seventeen has been trained in a normal school; abroad all have had that training. How much difference the quality of the teaching makes is shown by an experiment recently tried in France. A class of boys was selected with care that they should be not the brightest students, but merely fair representatives of the average school boy. They were placed under the best and most carefully trained teachers, to be given the most careful teaching. They began the lycée course two years later than it is ordinarily begun. They had the same hours, the same course and order of study, the same text-books, which they would have had in the lycée; and they did the work of the six years in two years and a half; all by virtue of the exceptionally good teaching they received.

In America, one serious lack is of the illustrative apparatus which is so indispensable. Nothing so stimulates a child as object lessons. To me, one of the saddest things in the condition of the grammar schools is this absence of all apparatus, — the apparatus in which Germany recently laid out $100,000 for the benefit of the schools.

I wish, as has been suggested, that an experiment station could be established at Cambridge, and trial be made here of the system recently introduced into the small towns in the south of Germany. Under our system a child is held back by that study in which he is weakest. It is found, however, that a child is usually "good in something"; and accordingly, in the towns in southern Germany, pupils are now being advanced in the subjects in which they do well, and are kept back only in those in which they fail. We shall watch with interest the results of this experiment. I think we have all felt what an advantage it would be if our classes could be made homogeneous; it would mean a saving of energy to the teacher, of much time to those students who do the best work, besides simplifying the work for the less apt pupils. I do not suppose it would be possible to have in this country schools corresponding to what are called the "dullard schools" in Germany, — which, by the way, seems an entirely unsuitable name for them. Yet if we could weed out of the schools ten per cent of the slowest children, there would result a great saving of effort all around. With the democratic idea which pervails here, it is the tendency of teachers to aim their pedagogic barrel at those pupils who are lower than the average of the class, to the loss, of course, of time and opportunity to the better students.

I believe that golden words have been spoken here to-day with regard to the so-called "dipping down" system. It seems to me the *colleges* can well afford to resort to this method, and admit from the secondary schools the best boys, — those who are really able to do the college work, — though they may not be prepared for the entrance examinations in certain subjects. Let those be made up afterward in college, as conditions.

Dr. Edwin P. Seaver, superintendent of the public schools of Boston, spoke thus: —

I have one aspect of the problem to submit. It might be supposed that in rising I wished to offer something in opposition to the criticism which has here been made on the schools; but I do not. I wish only to say a word as to how the practical question involved can be met, in my judgment. President Eliot spoke of two methods by which our pupils can be got to college better prepared and at an earlier age. My decided preference is for the former of these two methods, — namely by the "dipping down" system. Let the boys who are to go to college be taken out of the lower schools and put into special schools. The question is, can we bring the boys to college at the desired age by changing the nature of the grammar school instruction? I am the last to say no. I should like to see that improvement. It has been said that much may be done by substituting useful for useless information as, for instance, in the study of geography; but I wish to say that I have never found those schools where the children spend hours learning the names of all the cities in Mississippi and Louisiana. The trouble is not there. I wish to speak a moment of certain statistics from the Boston schools. If you consider the ages and classification of the children in the public schools of Boston, you will find that if the children entered school at a uniform age, and progressed regularly through the grades, there would be 6,000 pupils in each class; and if none dropped out, there would be 6,000 entering the high schools, 6,000 graduating from them, 6,000 entering college. Now I believe that, except those who are sick, or for some other reason incapaciated from going to school, all the children in Boston of ten and eleven years of age are in school. We find, however, that at thirteen, one-third of those children have dropped out; at fourteen, more than one-half are gone; at fifteen, only about one-quarter remain in the schools; and about 1,000 enter the high schools. They drop out very fast from the high school as you go from grade to grade, and the number graduating, and entering college, is only about sixty, or but one one-hundredth of those who entered the grammar school. Now it seems to me, that the suggested attempt to lift the instruction in the grammar grade in order to get students into college sooner, is like hastening the march of a line of soldiers, knowing that ninety-nine in every hundred will fall by the way; it is like marching the whole line faster in order that one in every hundred may arrive sooner. I would like to abandon that solution of the problem, and resort to what seems to me a far more practical method, — the differentiation of the grammar schools. Why should we not organize grammar schools for this purpose and for that, and have, for instance, a "Latin school" of a lower grade, to prepare those students who are going to the classical schools? Why need we have all the grammar schools as like as two bricks? Let the schools be organized to meet the wants of the different classes of pupils. If two-thirds drop out of these schools even before graduation, then, if we are to consider the greatest good of the greatest number, it is the needs of these two-thirds which we should study. Of course, all the threethirds should be looked out for; and it seems to me that this can be satisfactorily done by the differentiation of the grammar schools. Only let the superintendents feel that public sentiment is supporting them in the matter.

Mr. George L. Fox, of the Hopkins Grammar School, New Haven, said: —

I have listened with much pleasure to this discussion which has centered about two points. The first is the fact, which no one apparently has disputed, that the boy in the French lycée or the German gymnasium accomplishes a good deal more before nineteen years of age than the American boy in the secondary school. The second point in the discussion is, what is the best remedy for this disparity, which is not very creditable to us as American teachers. I have never visited the lycée or the gymnasium, but for two summers I have had the pleasure of visiting some of the public schools of England. The result of that experience is a firm conviction that the English boy of nineteen also surpasses the American school boy of the same age in scholarly attainment.

Here is a statement given me by a Rugby boy last summer of the work he had done in the school. His age was seventeen, and he was in the lower bench of the Sixth. He expected to spend at least one, and possibly two years more in the school.

In Greek he had read the Frogs of Aristophanes, the Olynthiacs of Demosthenes, I. II., the Oration on the Crown, and the Oration against Conon; of Plato he had read the *Meno*, *Gorgias*, and a book of selections; of Homer he had read six books of the *Odyssey* and three books of the *Iliad*. In the tragic poets his list comprised the *Agamemnon* of Aeschylus, the *Antigone* and *Electra* of Sophocles; the *Medea*, *Heraclidae*, and *Ion* of Euripides. The list of historians comprised a book of Thucydides and a book of Herodotus. Besides this, he had read in the Greek Testament the Gospel of Matthew and the Epistles to the Romans, Galatians and Philippians. In Latin the list of books read comprised four books of Livy, six books of Virgil, two of Cicero *De Natura Deorum*, four of the Philippics, Watson's edition of his letters, Cicero *Pro Cluentio:* two books of the Odes of Horace, two books of the Histories of Tacitus, and the *Rudens* of Plautus. His mathematics had been arithmetic, algebra, six books of Euclid, Elementary Statics and Elementary Trigonometry. As to modern languages he had read four books in French and three in German. This had of course been in connection with a large amount of composition in Greek and Latin, both in prose and verse. In his copy book of "fair copies," which he showed me, I found that one of the selections for Latin hexameters was a passage from Kingsley's *Andromeda*, and one for Greek verse was the passage from Shakespeare's *Julius Cæsar*, beginning,

> "O pardon me, thou bleeding piece of earth,
> That I am meek and gentle with these butchers."

To any one who may say that this boy was an unusual instance, I simply reply that I have other statements from boys in three different public schools, which usually equal, and in some cases, surpass this one. You will find all the Greek and Latin authors mentioned above, represented in the printed courses of study of these schools. The superior attainments of these English boys ought to be a greater incentive to renewed effort on our part than those of the French or German boys. In France and Germany the boys do more because they spend more hours of the day and more weeks of the year at their work, and under the tremendous forcing power of the state. But in England the school year is hardly any longer than with us, and the school boy there has an opportunity for outdoor sport and fun, which many boys in this country do not have. There is no state supervision. All the uplifting power comes from the personal ambition of the masters and the rivalry among schools for distinction at the universities. The fact, then, which we in this country have to face, is, that in Germany, France, and England the boy in the secondary school accomplishes a good deal more than with us.

As to any efforts towards improvement, President Eliot has rightly said that there are only two alternatives, the "dipping down" process, by establishing separate schools like the Boston Latin school, and the shortening and alteration of the grammar school course by inserting therein some of the preparatory studies like Latin. I will call your attention to the fact that in the case of public schools, the former method cannot be used for economic reasons, except in the larger cities, where the number of pupils preparing for college would warrant the expense of a separate institution. The smaller cities are shut up to the latter method, and here comes in the objection which has been well urged by Superintendent Seaver. Considering the small proportion of scholars in the public schools who enter college, is it wise, just, or expedient to make serious changes in the grammar school course for the benefit of the few, when such changes may not serve "the greatest good of the greatest number"? I believe that there is room for improvement along this line, but in making changes, it is always to be borne in mind, that the chief aim of the grammar school education is the preparing in the best possible way for active life the many who are not to enter college halls.

Mr. Charles E. Fish, Principal of Phillips Exeter Academy, remarked: —

Whether accidentally or not, Exeter is so placed on the chart that it has nothing to "dip down" into. The Boston high schools and the rest have an area below into which they may reach. It seems to me that this aptly represents the real state of the case. The fact that there are no fixed requirements for admission to Exeter has been rather severely criticised here to-day, yet I contend that if such a requirement were made at Exeter, not only Harvard College, but the whole of New England would be the loser thereby. A fixed requirement for admission, such as it has been said we should establish, would have shut out from Exeter Jared Sparks, (the alumnus who reflects so much credit upon the school). We cannot shut out, simply because they are not able to pass certain examinations, men who come to us with his motive of ambition, his abilities. We have no right to shut them out. If we had done so, we should have excluded all who have largely increased the endowment of the school. We should be false to the trust that has been given into our hands, we should fail to carry out the purpose which our benefactors aimed to enable us to accomplish. If we are to say to poor boys, whose opportunities have not been equal to their talents, "Come; we will give you that training you need," we must in some way enlarge our resources. Our endowments alone are not enough to make Exeter a free school. We cannot by a fixed standard for admission narrow the scope of our work. We need a larger endowment than that which has been given in support of scholarships. One of our aims is to be able to say to parents, "This is a safe environment for boys of thirteen," to be able to give boys that sort of training that is not confined to the study of books. We wish to give large opportunities for social intercouse, for the personal contact of pupils and teachers. But with our present resources we cannot do this for younger boys. There are difficulties that are fundamental in the way of setting examinations for entrance to Exeter. We have no feeders as the colleges have, and our patronage is less assured.

Mr. William F. Bradbury, of the Cambridge Latin School, was the next speaker, saying: —

There seems to have been some mistake in the plan of Mr. Hill's chart. I do not think, as is there represented, that the Cambridge Latin school graduates boys later than the other schools. Our age of graduation is represented on the chart as twenty. Now our class last year averaged eighteen and one-half years when they graduated, and the class of this year will also average eighteen and one-half. The diagram is certainly wrong. The Latin school certainly graduates its pupils younger than the English high school does. It has been said that parents send their children to private schools on account of the better teaching they receive there. I do not think that is true. The reason is purely a social reason. Parents in well-to-do circumstances do not wish their children brought up day by day with the children that come from homes where there is no touch of refinement; I do not blame them; none of us really want our children exposed to such associations. But let us be frank about it; it is *not* a desire for better teaching which calls the private schools into existence. As to the boys in France and Germany who go through here [indicating the space on the chart representing the gymnasium and lycée] they are the picked boys, — the boys who are selected by government and forced through by government. Abroad, there is every motive to send boys to the gymnasium and lycée: — there are all the honors and social advantages which a classical education gives; there is the opportunity for appointment to office, which is sure to follow the successful completing of these courses of study, and there is that most powerful motive, — exemption from military service. There are in America no such incentives; we do not so crowd the children here; I do not believe it is desirable that we should. Of late years there have been established many colleges for women, and some of the universities are giving to women the advantages of the privileges of their courses of study, to say nothing of the co-educational colleges. The girls are now to be considered. I do not think it at all desirable to try to hurry the girls through their work. I do not believe a girl should begin preparation for college before she is fourteen.

It is a conceded fact that we are never able to live up to our ideals. President Eliot has been for some time telling us what his ideal is for the schools. Now without saying that his ideal is not a good one, I propose to show that he is no better able than the rest of us to live up to his standard. He and his colleagues have the privilege of sending to the Cambridge Latin school each year, nine boys whom he judges to be worthy of scholarships. This year he sent us six boys; I have no doubt they were the best boys he could find. But just notice the effect those six boys will have on the average age of our graduating classes. The youngest will graduate at seventeen and a fraction; the next at nineteen, and so on in an ascending scale to the last, who will graduate when he is twenty-eight years old! That is the best, you see, that President Eliot is able to do in carrying out his ideal. I do not blame him! We are not particularly concerned about the ages of our pupils. We have one student who is fifty years old. She is now studying Latin, and is soon to begin Greek.

Mr. Frank A. Hill explained his chart still further, saying:—

The chart is designed merely to represent what would logically be the comparative age of entering college in the different countries if the different systems were exactly followed. As there are nine grades in the grammar schools in America, and five in the Cambridge Latin school, a child who entered school at the usual age of six years, would not finish the course till he was twenty, as is here indicated. The chart, moreover, represents only the matter of comparative age. If all the areas standing for the different grades and schools were drawn to scale, those representing the gymnasium and the lycée would be very much contracted, while the areas which stand for the primary and grammar grades of education would in each case be greatly enlarged. The area of the English high school would been larged in comparison with the Latin schools, and the space devoted to the universities would be very much diminished. In all our discussions we should keep very constantly in mind the vast number of children represented by the lower, lightly shaded areas* [the elementary schools]. It is of prime importance to keep the avenues to higher education open so that the children of this lower divison may rise. To cut adrift from these areas would mean disaster to the whole country. It is for the interests of the schools to keep up the closest possible connection with these lower grades, — and indeed between all the various stages in the course of study from the grammar school to the university.

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* See diagram.

President Eliot again arose and said: —

I wish to make a word of reply to my friend, Mr. Fish, of Exeter. He spoke of the responsibilities of that academy to the poor and unfortunate. I believe that no encouragement which is given to the class of students to which Jared Sparks belonged fails; but to raise the standard set before such men is by no means to cease to encourage them. The argument concerning the intentions of benefactors would apply quite as well to any college as it does to Exeter Academy. At no time within the last thirty years could Jared Sparks have entered Harvard with the preparation which Exeter gave him at the time when he did enter. The aim of many of the benefactors of Harvard was to help poor and ambitious students. Yet the requirements of Harvard have been steadily raised. Have all the colleges been wrong in so raising their standards? A great and endowed preparatory school has a duty beyond the few boys who come to that school. All increasing of requirements helps all along the line. When Harvard raises its standard, it benefits not only its own students and those of every other university, but also those students who never come to college at all. To advance the requirements at Exeter would be to advance the general standard in the schools below Exeter. It is a melancholy condition of affairs that, in a school of the rank of Andover, there should be absolutely no standard of requirements for admission.*

Mr. Seaver has said that he prefers the "dipping down" system to an attempt to lift the grammar schools to a level where that process will not be necessary. The "dipping down" method is practical, and it is now in use by well-to-do parents. Yet its general adoption would be much to be regretted, as implying the abandonment of any attempt to improve the grammar grades. The greatest advantage to the greatest number is to be secured by lifting the quality of instruction, the rate of progress, in the grammar grades. By so doing we benefit each child who stays there even one year, not alone those who go to college. The introduction of the study of geometry in these schools would entail a benefit which is widespreading, and which would tell in many of the great industries of the country. It would benefit every one. The greatest good of the the greatest number means the improvement of the grammar schools themselves.

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* See note, page 432.

The whole discussion turns on the wisdom or unwisdom of uniform methods of instruction for all pupils, whether they leave school at ten or at fourteen. Uniformity has more and more been forced upon our schools. Yet there are very few who will maintain that the raw material with which the schools have to deal is uniform. There is no parent who will not tell you there are great differences among his own children. This same doctrine of uniformity used to prevail among the colleges; — that each student should take the same course and give to it the same time. But the colleges are now abandoning this theory as inconsistent with the nature of things, with the laws of human nature. It is fundamentally false to human nature to proceed on the hypothesis that all men are uniform. We must work on the principle of variety. Never can two children be treated in the same way at home or in school, and this is the principle on which the schools should be conducted. This is the truly democratic theory.

Mr. Seaver asked for a moment to reply to President Eliot, and said: —

I agree with President Eliot in so far as his theory recognizes the falsity of the doctrine of uniformity. But I do not think anything is to be gained by trying to hurry the work of the lower grades. We may improve them,— as to that I heartily agree,— but it should not be for the sake of the few who go to college. All the improvements in education which have been so far accomplished have resulted in raising the age of the students, grade by grade. I do not see how this could have been otherwise. In order to bring about increased improvement and at the same time lower the age of admission to college, it will be necessary to differentiate the schools lower down. I do not see how it can be done in any other way.

At this point the Chairman introduced Professor John H. Wright, of Harvard University, who, in behalf of the President and Fellows of Harvard College, invited the members of the Association and their guests to visit the various museums connected with the institution, and especially to partake of supper then ready in an adjoining room. These invitations were readily accepted. The supper room was charmingly decorated and bountiful provision had been made for the comfort and refreshment of the visitors.

FRIDAY EVENING.

At 7.45 the Chairman introduced President G. Stanley Hall, of Clark University, whose theme was, "The Outlook in Higher Education." The audience, which included besides the members and their guests many of the Harvard Faculty of Arts and Sciences, manifested deep interest in the address and gave the speaker hearty applause.*

At the close of President Hall's paper, the Association adjourned to an adjoining room prepared as a parlor, in which the members spent an hour most enjoyably in social intercourse. Refreshments were served meanwhile in the supper room. The committee of arrangements for the social meeting consisted of Mrs. Alice Freeman Palmer, Professor John H. Wright, and Miss Julia A. Eastman.

SATURDAY MORNING.

At 9.15 the Chairman, Mr. Tetlow, called the Association to order for a business meeting.

Mr. Ray Greene Huling, of the New Bedford High School, for the Executive Committee, recommended the publication of the proceedings of the preliminary meeting of 1885, at which the Association was organized, the first annual meeting in 1886, and the first special meeting in 1887, in case the condition of the treasury would warrant the necessary expense. The Association thereupon voted that the proceedings referred to should be published by the secretary, and in order that the treasury might be prepared for the expense of publication, voted to instruct the treasurer to collect the assessment for the ensuing year, 1891-92, on the first of January instead of on the first of October, as heretofore.

The Executive Committee also nominated sixty-six persons for membership. These were unanimously elected to membership. Their names are as follows: —

ALBERT B. HART, Cambridge (Professor in Harvard University), JOSIAH ROYCE, Cambridge (Professor in Harvard University), FRANCIS A. WATERHOUSE, Boston (Head-Master of English High School), GEORGE L. KITTREDGE, Cambridge (Professor in Harvard University), WILLIAM H. BREWER, New Haven (Professor in Yale University), CHARLES S. CHAPIN, Fitchburg

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* This paper will be published in a subsequent number of THE ACADEMY.

(Principal of High School), George B. Adams, New Haven (Professor in Yale University), Andrew W. Phillips, New Haven (Professor in Yale University), G. W. Bingham, Derry, N. H. (Principal of Pinkerton Academy), Henry P. Wright, New Haven (Professor in Yale University), John H. Hewitt, Williamstown, Mass. (Professor in Williams College), James B. Taylor, Boston (Principal of the Berkeley School), Leverett W. Spring, Williamstown, Mass. (Professor in Williams College), Albert G. Harkness, Providence, R. I. (Professor in Brown University), Frank E. Thompson, Newport, R. I. (Head-Master of the Rogers High School), Nathaniel F. Davis, Providence, R. I. (Professor in Brown University), Mary A. Jordan, Northampton (Teacher in Smith College), Charles Henry Douglas, Keene, N. H. (Principal of High School), John T. Stoddard, Northampton (Professor in Smith College), Henry Johnson, Brunswick, Me. (Professor in Bowdoin College), Walter C. Hagar, Boston (Principal of the Berkeley School), Courtney Langdon, Providence, R. I. (Professor in Brown University), John M. Tyler, Amherst (Professor in Amherst College), Albert K. Potter, Springfield, Mass. (Teacher in the High School), Frank C. Woodruff, Brunswick, Me. (Professor in Bowdoin College), Julian D. Taylor, Waterville, Me. (Professor in Colby University), Edward A. Swaim, Providence, R. I. (Principal of the University Grammar School), John K. Lord, Hanover, N. H. (Professor in Dartmouth College), William W. Eaton, Middlebury, Vt. (Professor in Middlebury College), Francis D. Blakeslee, East Greenwich, R. I. (Principal of East Greenwich Academy), Eleanor P. Cushing, Northampton (Teacher in Smith College), Flavel S. Luther, Hartford (Professor in Trinity College), William W. Curtis, Pawtucket, R. I. (Principal of High School), Orlando M. Fernald, Williamstown, Mass. (Professor in Williams College), Henry A. Frink, Amherst (Professor in Amherst College), George A. Williams, Saxton's River, Vt. (Principal of Vermont Academy), William L. Cowles, Amherst (Professor in Amherst College), Judson B. Coit, Boston (Professor in Boston University), Arthur L. Goodrich, Salem (Principal of the High School), James Geddes, Jr., Boston (Professor in Boston University), Marshall L. Perrin, Boston (Professor in Boston University), Walter B. Jacobs, Providence, R. I. (Teacher in High School), Clarimond Mansfield, Melrose (Teacher in High School), W. A. Wilbur, West Bridgewater (Teacher in Howard Seminary), Frederick C. de Sumichrast, Cambridge (Professor in Harvard University), Charles S. Knox, Concord, Mass. (Teacher in St. Paul's School), E. H. Smiley, Hartford, Conn. (Teacher in High School), D. Y. Comstock, Andover, Mass. (Teacher in Phillips Academy), Silas M. Macvane, Cambridge (Professor in Harvard University), F. S. Morrison, Hartford, Conn. (Teacher in High School), Walter J. Towne, Providence, R. I. (Teacher in Classical School), Nathaniel S. Shaler, Cambridge (Professor in Harvard University), Charles H. Clark, Kingston, N. H. (Principal of Sanborn Seminary), Morris H. Morgan, Cambridge, Mass. (Professor in Harvard College), George E. Eliot, Jr., Clinton, Conn. (Teacher in Morgan School), Arthur M. Comey, Somerville, Mass. (Professor in Tufts College), David L. Maulsby, Somerville, Mass. (Professor in Tufts College), Ephraim Emerton, Cambridge (Professor in Harvard University), William F. Abbot, Worcester, Mass. (Teacher in High School), Roswell Parish, Boston, Mass. (Principal of Classical School), William L. Eaton, Concord, Mass. (Principal of High School), William Fuller, Lynn, Mass. (Teacher in Classical High School), Clarence H. Manchester, Providence, R. I. (Teacher in Classical School), George W. Rollins, Boston (Master in Public Latin School), William H. Ladd, Boston (Principal of Chauncey-Hall School), John G. Wight, Worcester (Principal of High School).

Mr. Ray Greene Huling, Secretary and Treasurer, made report as follows: —

The number of members previous to the present meeting was 114, of which number fifty-three were representatives of the colleges and sixty-one of the schools. Including the new members just elected the number becomes 180, of which number eighty-eight are from the colleges and ninety-two from the schools.

The condition of the treasury is as follows: —

RECEIPTS.

Balance Oct. 18, 1890,		$66 90
Assessments for 1888–9, (1)	$1 50	
" " 1889–90, (12)	18 00	
" " 1890–91, (82)	123 50	143 00
		$209 90

PAYMENTS.

Social Meeting	$50 50	
Postage and Stationery	24 08	
Printing Programmes and Circulars	12 62	
Proceedings	42 50	129 70
Balance Oct. 17, 1891		$80 20

ASSETS.

Cash on hand		$80 20
Assessments due 1888-9, (2)	$3 00	
" " 1889–90, (2)	3 00	
" " 1890–1, (30)	45 00	51 00
Total		$131 20

It is estimated that this sum will be sufficient to pay all ordinary expenses occasioned by the annual meeting.

The report of the Secretary and Treasurer was accepted and placed on file.

Mr. William F. Bradbury for the nominating committee reported a list of officers which, with one change, was adopted by the Association The officers for the ensuing year, as elected, are:

President, Timothy Dwight.

Vice-Presidents, John Tetlow, L. Clark Seelye.

Secretary and Treasurer, Ray Greene Huling.

Executive Committee, (with the preceding) Cecil F. P. Bancroft, Helen A. Shafer, Horace M. Willard, Charles W. Eliot, Elmer H. Capen.

Committee to confer with the Commission of Colleges in New England on Admission Examinations, Robert P. Keep (term expires 1892), William F. Bradbury (term expires 1893), William C. Collar (term expires 1894).

Mr. William C. Collar, of the Roxbury Latin School, presented the report of the Committee of Conference, which is here given.

Report of Committee to confer with the Commission of Colleges in New England on Admission Examinations.

The function of this committee is to act as the organ of official communication between this Association and the Commission representing the Associated New England Colleges. All matters referred to this committee, as subjects of conference with the Commission, are expected to be laid before the Commission either by letter or by personal, oral communication. The committee cannot, of course, act of its own motion; and as nothing was referred to the Committee by the Association at its last meeting, there was properly nothing to be done. Your committee did, however, venture unofficially, as had been done once before, with the apparent approval subsequently of the Association, to suggest to the Commission the expediency of its considering two subjects which the committee believed would soon be discussed by the Association. These subjects were:—

(1). A uniform requirement for admission to college in natural science.

(2). The substitution of an examination in writing Latin and Greek based on Latin and Greek texts, in place of questions on forms and syntax, and of requirements based on manuals of Latin and Greek composition.

Your committee made the suggestion in relation to a requirement in natural science without any knowledge that that topic was to be chosen for discussion at this meeting.

The Executive Committee of the Commission transmitted to that body the suggestions of your committee without any recommendation and no action was taken. The Commission promises, however, "to act on such parts of these questions as its functions permit it to consider, when further agitation shall show the urgency of these questions."

Respectfully submitted,

William C. Collar,
Robert P. Keep,
William F. Bradbury.

This report was accepted and placed on file. Mr. Collar added a few words preliminary to the presentation of a resolution, as follows: —

I had expected that my service on the Committee of Conference would close with the present meeting, and had intended to make these remarks simply as a member of the Association; but I find myself unexpectedly reëlected to the committee. It seems to me very desirable that the Commission should extend to the Committee of Conference a standing invitation to appear before it and present orally, first, such matters as the Association has referred to it. Twice the Commission has done this already, but generally it desires the committee to report in writing. For myself, I have great faith in the value of personal conference. It also seems very desirable that the Commission should consider subjects covering a somewhat wider range. This Association was founded to enable us to confer on any subject of common interest to the schools and the colleges. It has, it is true, found its chief subjects for discussion among those relating to admission requirements. Now the Commission has no power to act except upon matters relating to uniformity of requirements. I conceive that if all questions relating to admission to college, including modes of examination, were within its province, more fruitful results would be obtained. The *mode* of examination, for instance, is a very powerful element in the case. I could show that when the requirements have not been altered, simply a change in the mode of examination has occasioned an entire change in the methods of teaching. This is true of the examination in geometry at Harvard, which within ten or fifteen years has effected a revolution in the teaching of that subject in the schools. An Agent of the State Board of Education told me that the examination in physics at Harvard had created a similar revolution in that subject in Massachusetts. At present, however, the Commission cannot consider this matter of the mode. I wish that its scope might be enlarged. Hence, I offer the following resolution and move its adoption: —

Resolved, That in the judgment of this Association, it is regrettable that the function of the Commission representing the associated colleges of New England should be restricted solely to the maintenance and promotion of uniformity of requirements for admission to college, and that it is desirable that its scope should be so enlarged as to include generally the subjects of admission requirements and modes of examination.

The resolution was thereupon adopted without dissent, as the sense of the Association.

Upon motion of Professor John H. Wright, of Harvard University, the following resolution was unanimously adopted: —

Resolved, That it is the sense of this Association that it is highly desirable that the committee appointed to confer with the Commission of Colleges on Admission Examinations should hold a personal conference with the Commission at regular intervals.

Mr. Collar rose to present a resolution, saying: —

We are near the end of our series of meetings for this year — meetings more delightful, more interesting, more successful than almost any that the Association has held; and I believe all will agree that some part, and no small part, of our enjoyment and profit has been due to the happy good fortune that assembled us at the seat of this ancient university. It was surely a fitting and a gracious thing that that university which once and again had invited schoolmasters to sit in consultation with its faculty on requirements for admission, should throw open its gates in hospitality to an association that is, in some sense, its own offspring; for to the action of this university, to which I have referred, was due the suggestion of the origin of this Association. I desire, therefore, to propose the following resolution, and to move its adoption: —

Resolved, That this Association owes hearty thanks to the President and Fellows of Harvard University for their kind invitation and hospitable reception.

This motion was passed by a standing vote.

On motion of Dr. Gallagher, it was voted;

That the Association extend thanks to the committee of arrangements for the social meeting (Mrs. Palmer, Professor Wright and Miss Eastman), for the efficiency with which they have discharged their duties.

The business meeting being thus concluded, the Association adjourned for a five minutes' recess.

Mr. Tetlow then called the meeting to order again, saying that the question for this session was one which has received serious and increasing attention. He suggested that among other points it should be considered what ought to be included in science requirements, and what methods of study are best to be employed. He then introduced Professor Samuel F. Clarke, of Williams College, to speak upon "Natural Science as a Requisite for Admission to College." This paper is given in full, see page 422.

The discussion which followed was opened by Dr. William Gallagher, of Williston Seminary, who said: —

We can commend the choice of the committee when yesterday they called upon a man who is an expert in the question then under consideration to open the discussion. But to-day in order to bring about a discussion, they say, "Go to, let us go up and down New England and find a man who never had any training in the line we are considering, and get him to present the case;" perhaps they are desirous that the vulnerable points should be exposed.

I am thoroughly in accord with what Dr. Clarke has said as to the desirability of science work. Yet I will to-day put before you some of the handicaps which are made evident in attempting to fit for college with a scientific requirement. I do not take this side of the argument because my own school is either unable or unwilling to do this work. The generosity of our founder made provision for laboratories, apparatus, etc. We have the equipment of teachers, the organization, the apparatus, to meet any demands which might be made by pupils for work in biology. Each boy has his own microscope, his own set of tools. We have a course in biology, in which is included drawing from objects and dissecting.

Nevertheless, I believe that there are certain handicaps which are to be met in trying to prepare for college with an additional requirement in science.

I have never till to-day heard this subject discussed without constant reference being made to the fact that the sciences are "interesting and attractive" studies. Now this to me is one of the difficulties in the way of good teaching in science. I am not looking for things that are interesting and delightful to my students. One of the speakers yesterday told the incident of the little girl and her diatoms, saying that she found such delight in them. That is the point; boys come to me and say, "I guess I'll take biology, — that's looking through a microscope and all that, isn't it?" They call it a "soft snap." We can't make them see that there is any serious work to be done in these studies. It has all been made so interesting and so pleasant for them in the lower grades that when they come to us, they do not know what it means to work; they run away at once from anything that looks like an obstacle.

Now as to the second handicap. We are fitting for the scientific schools. The boys look in the catalogue and they see there that a certain graduate is now drawing such a salary. They wish to make haste to get through that school so they can be drawing that salary. This material aspect of the subject is a great hindrance to good work. The boys want to vault the graduate fence; to do only so much as will enable them to get that position out in Montana. They do not want those things which make for a broader culture. The majority who come to us have merely money in mind. It is the almighty dollar and nothing else that they are working for.

A third handicap is that we cannot get the time. Twenty-six years ago I sat in this room and wrote my examinations. Last June I sent my boy here. And it is instructive to compare the work he did here with that which his father did. I could not possibly have done the sight work that is now prescribed. In history I knew more dates than my boy will ever know, but I had no idea of the growth of the Athenian democracy. I didn't know there was an Athenian democracy. We learned the geometry of the book, but an original problem we should never have thought of attempting.

I could not have faced those examinations. There is not one subject in which the requirements are not greatly increased, to say nothing of the additional requirements. Now modern languages are required; in those days no preparatory school thought of teaching French or German. Among other things, English has been added, and English to-day, I am glad to say, means something. Now we are asked to put in a science. My boy is being worked to death to meet the requirement in physics. The only way I can see out of it is to let him take it after he has entered college, as a condition. We can find for him, in school, only two hours a week to give to the study. In that time he can get through, perhaps, one or two experiments. Yet we are doing all we can for him. We feel the pressure tremendously.

A fourth handicap is the danger of too great demands being made on our pupils by specialists. I believe the examinations are harder than they should be. The specialist of forty who sets the examinations for the boy of fifteen is apt to do him great injustice. Who is it in each college faculty that insists on the science requirement? It is the biologist, the physicist, the chemist. And each says there must be a requirement in his specialty. One college says we must have so much physics, another, chemistry. And the schools are asked to meet this varying demand. Harvard has established physics as its science requirement, but it is by no means certain that the other colleges will follow Harvard in this regard.

And the worst of it all is, that when we have done our best, it will be little enough. The professors in college will say, "Oh for a mind that has not been meddled with, — oh for a clean page! Give us a boy without the conceit of a little knowledge." Yet, what can you expect? It was remarked what an advantage there would be in having homogeneous classes. I have to-day in one of my classes a boy of thirteen, another of eighteen, a young man of twenty-five, and another of twenty-two. These students will remain under our instruction probably on an average, two years and a half. We cannot do much for them in that time, but the college men should be charitable and say, *not* "What can you have been doing with them all these years?" but, "What must the state of these fellows have been before you got them?" I have an excellent assistant in my school in natural science. His father was an eminent Greek professor, and he himself has been through that mill. Yet he comes to me and says, "I wish we could find some way of getting as much discipline out of biology as you do out of Greek. I have been through both, and I know that we do not begin to get the same drill out of biology that you do out of the Greek."

The chairman, Mr. Tetlow, in declaring the general discussion open, remarked: —

It would be well for the Association to take into consideration, besides the difficulties mentioned by the last speaker, the question of the subjects recommended by the American Society of Naturalists; namely, botany, physical geography, and physiology. The time for cultivating the observational faculties undoubtedly is in youth, and botany is specially well adapted to that cultivation; but it is to be considered whether the establishing of a requirement in botany for admission to college will not tend to establish a literary method in that study in the schools. In preparing for an examination, will not manuals and text-books be resorted to? Harvard has found that its present requirement in science has been fruitful in results, that the physics teaching has been revolutionized. It is desirable that testimony be given as to the kind of mental training the college requirements in science produce.

Mr. Charles W. Parmenter, of the Cambridge Latin School: —

I desire to emphasize the importance of the distinction made by the essayist, between the habit of thought induced by the right study of science, and that which results from the study of language. Dr. Hall showed us, last night, how completely the advancing thought of the age is controlled by the scientific spirit. There is no doubt that the vexed problems of the future are to be solved, mainly, by the scientific type of mind.

The culture which results from the study of language is admitted to be of immense importance. It is essentially the same in character, whatever the language pursued. Under favorable conditions, any science may be made the means of cultivating the scientific spirit. Physics has certain important advantages, and due consideration should be given to the success of the Harvard requisition in this branch.

I plead for a clearer recognition of the value of the work of the teacher of science. If he is to cultivate the scientific spirit in others, he must possess it himself. His methods of presenting the objects of knowledge, and of questioning pupils, must be essentially different from those pursued by the teacher of language. High success demands from the science teacher as great pedagogic skill, and as broad and accurate scholarship as is required in any other department. Daily experience convinces me that no more work can safely be required of pupils. Good preparation in science will not be possible until the colleges recognize the importance of the science teacher's work, by making the requisition in science a clear equivalent for something now required of admitted value.

At this point Mr. George L. Fox called for Professor William North Rice, of Wesleyan University, who responded thus: —

Mr. Fox has alluded to the introduction of science into the Middletown high school. In respect to this, I would say that we have had to labor under this disadvantage, that our pupils have not always had good teaching; there were sometimes no teachers prepared to give them the training they require. Yet I am nevertheless ready to say that the general result of the science work has been beneficial. There is no need to plead for the value of the scientific studies in themselves. It is conceded that they should be introduced at an early age. Professors find that their students are deficient in the faculty of scientific imagination, as well as in that of observation.

Students should early be trained in the power of observation, and should be made familiar with the objects of natural science. One natural science should be required in the schools; it is of no importance which one is chosen. The Society of Naturalists made choice: first, of botany, because the appliances for teaching it are simple, and because it cultivates the habit of fine and careful observation; second, physical geography, because it seems a broad, strong, and interesting subject; and third, physiology, because of its direct practical bearing on everyday life. Yet I believe that it is quite as well to leave the particular science to the option of the particular school. Let each one send up pupils prepared in the study which it happens to be best prepared to teach. It does not matter what science. The main point is that students shall come in touch with nature somewhere, we do not care where, so that when a boy comes to us, he will not look at us as if he did not know that there is such a thing as an external universe.

There are certain difficulties in the way of making a requirement. The experiment in botany at Harvard, fifteen years ago, proved a failure, as reported by Professor Farlow. It was found that the students knew only words. But I will suggest for your consideration a change in the high schools and academies, which makes the present conditions of the experiment vastly different from those of fifteen years ago. The average high school then was manned — or womaned! — by a force of three teachers, only one of whom was at all likely to be a college graduate. Now all the teachers in a high school are likely to be college graduates. Now the colleges for women are turning out a multitude of young women who have had thorough scientific training, laboratory work, etc. This change makes a prodigious difference in the possibilities of having good work in science in secondary schools. They can and do give good instruction in science to the pupils who take the English course, and, if it were required, they would give it to the classical students.

The question now arises, how time can be found for science in addition to the other work. I have made an analysis of the work done in eight different preparatory schools, — one high school and seven academies, — which send pupils to the Wesleyan University. None of these schools take pupils before they finish the grammar grade, none of them specially fit for Harvard; all have a four years' course; — that is, they are all schools of a four years' course above the grammar grade, and fit for the ordinary New England colleges. I find that their courses are all essentially conditioned by the requirement in Latin. I assume three studies a term, that is, thirty-six term-studies in the course. Latin runs through the schools, occupying from ten to fifteen of the term-studies, or an average of twelve; Greek occupies eight, algebra and geometry together, six; making in all, twenty-six. What is done with the other ten term-studies? I find that an average of three term-studies is spent in the review of the arithmetic and other subjects taught in the grammar schools. Now this seems unnecessary. If, as has been asserted here to-day, too much attention is given to these subjects in the grammar schools, it certainly is a waste of valuable time to dwell on them further in the high schools. Furthermore, much of the last term's work is given to review of the Latin, Greek and mathematics of the course, which also seems unnecessary. Room, then, it seems to me, might be made for science, by omitting from the high school all work in the lower English branches, and a portion of the review work in the secondary studies.

Mr. Tetlow said that he, for one, would dislike to see the natural sciences made a requirement, if the result were to be to make them no longer observational studies as taught in the schools, but purely literary studies.

President G. Stanley Hall, of Clark University, then joined in the discussion, as follows: —

I have not long been a member of this Association, yet I have observed that it has spent much time upon the discussion of this subject. I for one, have an impression that the work of the committee to report in this matter has been well done, that its suggestions have proved stimulating in awakening discussion; yet it seems to me that a stage has now been reached when a different method should be adopted. Yet the problem is a vast one, and it may be premature to hope to arrive at present at any conclusions.

I cannot agree with those who hold that it makes no difference what science is studied. It makes all the difference in the world. What is true in one science may be untrue in another. We should, therefore, come to some agreement as to what one it shall be. Again, we should have some definite understanding as to the way these subjects shall be taught in the schools. In these regards we may learn of other countries. Let us consider the *code* which was adopted in the English schools; and which was also introduced into the German schools. This code was formed in this way. A number of men were got together who were experts in some subject, — say, in physics. Each man individually worked at the question. They sifted text-books and apparatus, investigated what was really most effective in *teaching* that subject. Then they met and laid together their experience. They invited to the conference teachers who had had experience in the different methods. Then experiments were tried in the normal schools, and results tested. The committees in each of the various subjects, — physics, chemistry, etc., — proceeded in this way, and their code was manufactured. In former times the course of study was a canon, — it was inviolable. So this curriculum is made a canon. Text-books must fit it, — it is above the text-books. I can see how some such plan can be followed here, for instance, in physics. Physics should not be taught in the schools with the material they now have at hand. A committee could be appointed to get together a list of the illustrative apparatus and diagrams which are needed; these could be presented before the Association, and typical experiments could be made. We could thus show the non-experts what we mean by *scientific* study; — how that work is for that grade of students, and this for another. I believe that we have reached a stage where this could be done. We should have to take the question gradually; we cannot get at it in four years or in five. There is a great difference between subjects which have had for years the benefit of a good pedagogic manipulation and those which have not. Latin and Greek have been taught so long, so many good teachers have given their best work to them, that text-books and grammars to-day are epitomes of all the experience of the best teachers for generations. Pedagogic thought has not been given to science study. Text-books in science have not had the benefit of pedagogic experience. Results might be attained if we were to appoint, for instance, a committee to arrange a conspectus of the work in science in much the same graphic way as Mr. Hill has represented by his chart the courses of study in the various countries.

Dr. Edwin H. Hall, Professor of Physics in Harvard University, said: —

When I was a boy, I remember there was a certain plant, called the dog lily, I think, which we were all eager to find; for we used to say that it was "good for sickness." What sickness? We did not know, — it was "just good for sickness, — any kind of sickness." I have been reminded of that to-day. It has seemed the idea of some of the speakers that any course in science is good, — good for all sorts of mental development. This is a mistake. It does make a very great difference what science is studied. Botany has been suggested as a good subject for the uniform requirement. But botany is of no use in the study of physics, — except, possibly, in the matter of training the hand. I would rather have, in an experiment in physics, a student who had worked hard in Greek than a student who had worked in a desultory way in botany. Much has been said about the "scientific mind." I believe that the scientific mind is born, not made by any of these studies. Science study in the schools is important in itself, apart from the question of mental development; important for the practical knowledge, the information it gives. We teach for training in physics, that is true, but not without regard to the facts in physics. We have taken care that nothing shall go into our Forty Experiments which has not direct application to the practical affairs of life. I wonder whether to this fact has been due the success of those Forty Experiments?

As to science studies being interesting and easy, — I have not recently heard any complaint that Harvard's requirement in physics was too easy. There may have been ground for that complaint at first, but it had ceased to exist even before the complaint ceased. Now that impression seems gradually to have disappeared. On the other hand, I have not heard any decided complaint that the requirement is now too hard. Now as to the difficulties to be met in science teaching, one rule which is to be observed for successful work in any science is that a definite end must be put before the student. I find that in descriptive physics, it will not do for me to ask the men to observe and tell me what they see. One by one they drop away from the laboratory. But if I require a measurable result to be obtained from their observations, then they are interested and stay there at work the whole two hours.

Botany seems such a desirable subject for a place in the schools, it is so easily within their reach, and may be made so constant a part of the pupil's daily life, that it seems as if we ought to be able to *assume* an acquaintance with elementary botany in our students just as we assume an acquaintance with arithmetic. There used to be a requirement in arithmetic at Harvard. But that no longer exists. It seems no more advisable to have a requirement in botany.

As to the experiment tried by Harvard, which has been so successful: — of the candidates presenting work in physics, two-thirds presented experimental physics. Last June, we had to examine two hundred and fifty men in the laboratory. It was a great deal of trouble and it took time and it was expensive. It cost Harvard five hundred dollars for the mere examinations. Yet we think it is entirely worth while, — the students do so much better in the course.

As to the expense of the work in the schools, whatever system is adopted, the expense is not large, — five hundred or a thousand dollars added to the equipment would be adequate. Experimental teaching in science takes more of the teacher's time, that is true, but in the same way, Harvard College could save money, if it wished, by having but the one teacher in physics as it formerly had, instead of the many assistants now needed to conduct the recitations in laboratory work.

Mr. E. H. Cutler, of Newton, then read parts of the examination paper in the text-book course in physics, given at Harvard last June, and said: —

I have taught physics for five years, and have always got my idea of the requirement at Harvard from the examination papers. This particular examination all of my three candidates passed, two of them much to my surprise. Though I do not present myself as criticising the paper, yet I would like to ask why proficiency in observational physics should be tested by numerical problems? One of my students who passed with credit the algebra and geometry examinations, could not do the first problem in physics (one that related to angles). I think that I shall have to make a change in my geometry teaching in order to meet the physics requirement. As physics is at the best such a hard subject, it seems to me that it might be made one of the optional and advanced subjects in the Harvard examination. I would choose to prepare a boy in trigonometry, logarithms, or in analytical geometry rather than in physics.

Dr. Edwin H. Hall replied that that particular paper had been criticised more than is usual.

President Eliot, of Harvard University, took part in the discussion, as follows: —

The experiments here at Harvard have resulted in something useful, — in a great improvement in the schedule of requirements. There is one subject there yet which we all regret, and that is the book requirement in physics. And we are hoping to give up that. I am convinced that book work in science without laboratory work is not nearly as useful as the same amount of time given to Latin grammar. However, our experience may be useful in showing other institutions what to avoid. I feel sure that we have chosen the best subject for science study in the schools, namely, physics. There are two reasons why botany is not as good a subject for the schools as physics. First, it cannot be studied all the year, — and this is a very real disadvantage; to physics can be given steady and daily work. Secondly, botany is a subject suitable, admirable, for the kindergarten, and for the primary and grammar schools, and should be begun there. Geography was tried as a requirement, but the objection was the almost complete lack of appliances for teaching it. Not only is the apparatus lacking, but also teachers able to teach geography as a natural science subject. There are two objections to the teaching of physiology in the schools, — one of which President Hall has already mentioned, namely, the complete lack of apparatus. The other is the fact that physiology is required by law in the grammar schools and in some high schools. Thus there is an annual crop of text-books in physiology, mainly written by men who know nothing about it. Moreover, the law makes this provision to gain the end of having temperance taught, rather than science. It aims to have the injurious effects of alcohol and tobacco set forth to the pupils. This may be a good ethical object, but it absolutely destroys any scientific aim in teaching physiology. Science loses entirely its value as a study unless it is pursued for the sole end of finding out the truth. If taught to establish a theory or with any object in view except the truth, it is essentially immoral. Children come to know that it is the evil effects of alcohol and narcotics that they are to study, not the facts without reference to the ethical question. They find on almost every page statements which, if not untrue, are at least unproved. I recall a certain text-book on physiology which I examined not long ago, and which is extensively used in the public schools. I submitted it to the professor of the subject in Harvard University, and he said, after a careful examination, that in the present condition of physiological science scarcely any of the statements intended to enforce the teaching of temperance were capable of demonstration. The object of science primarily is the seeking of truth. If children think you have an ulterior object beyond the seeking of truth, your work fails.

Chemistry is in many respects a good subject, already introduced into many schools. There is in it exactness, precision, and the possibility of training in reasoning.

I agree with Mr. Parmenter that it is the scientific habit of mind which we wish to inculcate by our admission requirement. Any science taught with the proper appliances can give this scientific method. But above all, we want *teachers;* — teachers who can teach the children to think, as books do not teach them. The study of the subjects and laws of science gives a kind of training which books cannot give. It is the scientific mode of thought which we aim to secure. Either physics or chemistry will accomplish this. And I want the efforts of the schools concentrated on either physics or chemistry.

It is said that there is not room in the schools for any additional work. I would suggest the method of escape. If the school program is crowded, how much more is the college program? What is the escape in college? The elective system. And that principle must go into the schools. There are two ways in which it may be done. Individual pupils can choose in the same school what studies they will pursue, or individual schools can elect what group of studies they will teach. The optional method solves the whole time question for the schools. There is already a tendency to introduce elective subjects in the public schools, and that tendency we may all work to encourage.

The main line for effective work is being wrought out here by our experiences. It should be remarked what wonderful progress, in spite of all difficulties, has already been made in science teaching. In the West ten years ago there was not to be found a public school equipped with a laboratory for biology and taught by the principal of the school. Work in science was always relegated to an assistant. To-day in many western cities there are schools equipped with laboratories for work in physics, chemistry and biology, and science is being taught by men of high standing in their respective lines. We have reason for hope in the matter of the introduction of science into the secondary schools.

The Chairman, Mr. Tetlow, suggested that an appropriate outcome of the discussion would be the appointment of such a committee as President Hall had mentioned. Thereupon, on motion of Mr. Parmenter, it was voted: —

That the Executive Committee be instructed to consider the expediency of appointing a committee to formulate suggestions relating to Elementary Science as a Requisite for Admission to College, and have full authority to appoint such a committee if this action seems desirable.

Professor John H. Wright, in the name of the President and Fellows of Harvard University, again invited the members of the Association and their guests to luncheon in the adjoining rooms.

The Association thereupon, by adjournment, closed the sixth annual meeting.

RAY GREENE HULING, *Secretary*.

NEW BEDFORD, MASS.

THE HOLIDAY CONFERENCE.

THE Seventh Holiday Conference of the Associated Academic Principals of the State of New York will be held in the High School building, at Syracuse, Dec. 29 and 30, 1891. While we cannot give full details in this number of THE ACADEMY, we are able to state that special hotel and railroad rates will be obtained.

The following are some of the questions to be discussed: —

The Kindergarten in our public schools.

University Extension.

What credit should be given by Normal schools to Regents' credentials.

Do the Regents' Questions, as now issued, encourage broad teaching?

Can the courses of study in our secondary schools be shortened?

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THE LATIN QUESTION.[*]

JOSEPH JACKSON, WOODLAND STREET SCHOOL, WORCESTER, MASS.

Charles Kingsley, in his charming Cambridge lectures on "The Roman and the Teuton," describes under the figure of a myth or saga the influence of the name of Rome on the barbarians who came swooping down upon Italy after the opening of the Christian era. The *Romani nominis umbra* had cast a spell upon them, the influence of which it required several centuries to relax, and which was never entirely dissipated. Roman law, Roman civilization, and the Roman language were thus firmly fixed upon and incorporated with, if they did not entirely supersede, those of the conquering hosts. The conquerors were in these respects conquered by their enemies, and for the fourteen centuries since Romulus Augustulus laid down the Imperial power, the language of Rome has not ceased to be studied in the schools, and to be used in the services of one of the great branches of the Christian church.

It has been reserved for this last half of the nineteenth century to make the most serious attempts to remove the Latin language from its high seat of influence and power. Perhaps it may be time that the old order should change, yielding place to new, lest one good custom should corrupt the world. The Latin question seems now to be largely a public school question, a question agitated largely in those countries where secondary education is provided at the public expense, and where youth are required to pursue certain studies in order to obtain the certificates or diplomas by the possession of which alone they may be allowed to proceed, if they wish, to the higher studies, or to enter the professional schools.

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[*] *La Question du Latin:* par Raoul Frary.
La Question du Latin et la Reforme profonde de l' Enseignement secondaire: par M. Guerin. Paris: Librairie Lèopold Cerf.

The student in the private school, who pays his money, may be allowed to choose from the curriculum what it suits his taste to study; but the student in the public school must, as a rule, take the curriculum, the whole curriculum, and nothing but the curriculum provided by law. This statement applies, however, largely to those continental countries where the state, as in France and Germany, provides a course of study for all the public schools, rather than to the public schools of the United States where each local community, controlled to some extent by statute as to the subjects to be taught, through its school committee, arranges a course of study for its own schools, with modifications adapted to the real or supposed needs of the pupils, and with considerable latitude of choice allowed even from the beginning of the secondary school life.

Whether all the pupils in a given community should be subjected to the same primary education is a matter that is hardly supposed to admit of question. Certain subjects are considered so necessary to each child that all must have a certain amount of knowledge of them before they can be considered prepared to leave school for the active pursuits of life. The subjects to be taught, and universally admitted to be necessary, are reading, spelling, writing, arithmetic, geography, the language of the country, the history of the country, drawing, music, gymnastics, and morals. These are uniformly taught among civilized nations, with locally some additions, such as sewing, cooking, manual training, etc. Comparatively little, therefore, is now said as to the reform of primary education, so far as relates to the subjects taught, and all the energy directed toward these subjects seems to be in the line of improvement of methods so that the best results possible may be attained.

The agitation has been shifted now to the field of secondary education, and the discussion lies between those — the Idealists we may call them — who think experience has taught that the study of the Greek and the Latin languages furnishes the best mental training, and those — the Utilitarians we may call them — who think the advantages of the modern languages and the natural and physical sciences, especially those involving economic applications, are entitled to a larger share of attention. If Idealists and Utilitarians could agree upon a definition of education they might more nearly agree upon a method of attaining it. But the definitions of education, given by the best thinkers from Plato to the present time, are expressed in such general terms that it is impossible to agree upon the method to be pursued. And again, most of those already engaged in teaching have been trained in the ways of the Idealists and do not favor a change.

The two volumes before us* contain perhaps the clearest statement which has been made of the feeling against the study of the ancient languages on their present basis, as it now exists in France and some other countries. M. Frary takes decidedly strong ground against the general study of Latin by all pupils in the secondary schools. M. Guerin, while advocating the study of both Greek and Latin, yet proposes certain changes in method to the end of gaining time for other studies which he recognizes as of great importance, but as now neglected on account of the undue proportion of time devoted to Latin and Greek.

The result of the Franco-German war of 1870 has been nowhere more visible than in its effect on the educational system of France. The school system became at once one of the most important of political questions as a means of restoring to France her lost prestige. She has now placed her primary schools on a satisfactory basis, for the present at least, and is turning her attention very closely to her secondary schools, examining not only the methods but the purpose to be attained. Even the most eager opponents of the present system advise to go slowly. They realize that though the Revolution might find generals among the sub-officers, it could not find professors or teachers among the illiterate. As M. Frary puts it: "We can conceive a plan, adopt it after ripe deliberation, then apply it with firmness, without haste or fumbling. When we know what we want we can take time into the account. It is not necessary to fly to the result; it is enough to walk there. The great evil is not slowness; it is error. A lame man who knows his way arrives more quickly than a courier who loses his." With a patriotic purpose he has set himself to the task of discovering, if possible, what form of secondary education will be most useful for France.

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* See note, page 465.

Under the Republic, questions of education are no longer purely literary questions, for they concern the future life of the nation, since false solutions may compromise its domestic tranquility, or weaken it in its incessant struggle with its business rivals. A change in the social conditions calls for a change in the courses of study and the methods of teaching. All classes of men are drawn more closely together, and thus many social questions are rendered more complex. Under pain of death one must march with his age, and if his age be an epoch of transition, of the triumph of the democracy, the old truths may need to be submitted to a new discussion, and the statement of them to be modified and suited to the new conditions.

M. Frary's argument may be briefly stated as follows: What can we do in the matter of secondary education that will help us to regain our lost prestige in military affairs and restore us to the proud position in Europe which we held a century ago? The invasion of 1870 obliged us to admit an inferiority the origin of which should be carefully sought. The convulsions of the Commune buried deeper in our minds the hard lessons of our defeat. The very example of our conquerors engaged us to found on a better education of our youth the hope of a revenge or the security of our diminished territory. The school is one of the fields of battle which the political parties dispute with the most bitterness. In regard to secondary education much has been said, but not all. Methods have been discussed with sufficient intelligence, spirit, and learning; but the purpose to be attained has not been so thoroughly discussed.

M. Frary enters upon the task not because he considers himself an authority in education, but because he considers the work useful to the state. It has seemed to him that the reform of secondary education is of more concern to the future of France than the people commonly suspect, even those who are interested by taste or profession. He attempts to prove that even the material prosperity of France depends in good part on the direction given to studies in the lycées and the colleges, and that the managers of these charge themselves with a responsibility the extent of which they ill conceive when they assume this great power over youth. Questions of teaching are not purely literary questions; they concern our future and our life, because false answers may weaken us in the struggle for existence. So strongly is he impressed with the importance and influence of courses of study and methods of teaching that he believes there are few phenomena in the life of a nation in which the consequences of a pedagogic error are not felt. The more bitter the competition among civilized peoples the more hurtful do such errors become. Inferiority becomes a peril and a source of suffering.

Nowhere is this more thoroughly felt than in France since 1870. Her martial spirit received a severe shock at Sedan. The legacies of the past are no longer to be accepted without examination; tradition is no longer a sufficient title. Even the university itself cannot escape this law, or preserve under the new regime the same character as in a society where the aristocracy of birth or the aristocracy of wealth reigns. The primary school is free; there is a demand also for free secondary schools. Secondary teaching constantly costs the state more and more money, and is divided among a constantly increasing number of young Frenchmen. It is then more and more necessary to examine whether this money is well employed, whether these young Frenchmen receive a real benefit. Poor teaching would now make both more victims than formerly and more innocent ones, because the will of the parents has less and less influence on the vocation of their children.

The key note of M. Frary's book is the culture of the useful rather than the culture of the beautiful. The state has put its hand on public instruction. It keeps shop for Greek and Latin, science and history. It imposes upon competitors the courses which please it, for it distributes diplomas and makes them an indispensable passport, a key without which a very great number of careers remain closed. No one is obliged to be a bachelor of arts, but he who is not a bachelor cannot practise certain professions, as the law and medicine. It is the state which judges whether the knowledge of the dead languages is necessary in order to formulate an ordinance; there are men who can never practise medicine, nor be able to perform a surgical operation, because they have once been incapable of applying correctly the rules of Latin syntax.

It is over secondary teaching that the state exercises the most absolute domination. Primary teaching depends especially on the nature of things; nothing can take the place of reading, writing, and arithmetic. Higher or superior instruction, which is almost entirely professional, is always subordinated a little to the needs of the profession to which it looks forward. We must begin by clearing the soil and end by sowing what we wish to harvest. But classic studies are like an intellectual manure, arbitrarily selected, which is spread by the sovereign power, without regard to the diversity of culture and the quality of the soil, and without having proved by a careful and comparative experience the habitual utility of this obligatory method.

M. Frary's third chapter, *Les Origines*, is one of the most interesting parts of his argument. It touches on the following points:—Everywhere the past presses upon the present, everywhere the idea of conservatism and the idea of progress sustain a necessary and fruitful strife with each other; especially is the legislator tempted to impose on new generations the ideal which has presided at his own education. In most industries the inflexible law of competition assures to progress a decided superiority; truth gives wealth; error is weakness. In politics principles without end are discussed; parties follow each other to power by a sort of regular oscillation, and, if the people advance, it is along a broken line. In the questions of education, on the contrary, the conservative forces have the advantage, because it is as difficult to accomplish changes as to prove their necessity. The interested ones are the children who are but little consulted; the most competent men are naturally favorable to a system which has permitted their merit to shine forth.

It is not from the Middle Ages, it is from the Renaissance that our system of literary education dates. In the Middle Ages Greek was unknown; Latin was spoken and written; it was known ill. It was still, at least for the clergy, a living language, consequently much corrupted. As to the young nobles, they were educated for war and chivalry, rather than for mind. The school of the future lords was the court of the sovereign, the castle of the powerful and famous baron. Pages were not condemned to submit to the discipline of theologians; it was not believed that a soldier should be formed like a monk or a legist. It was thought, even in those ages of ignorance, that the best way of learning one business was not by learning another.

It was in the sixteenth century that classic teaching as we have preserved it was organized, that Latin became the basis of a liberal education. Men were then dazzled by the splendors which had just been revealed to them. The thirst for knowledge seized upon all those who aspired to hold an honorable rank in society, gentlemen as well as clerks, courtiers as well as legists. This thirst could be quenched only at a single source. In order that Latin should become the basis of all honorable education it was necessary that the fashion should be fixed by a corporation alive and firmly attached to its own rules. It was the Jesuits who thus founded and organized secondary teaching, because they attracted into their colleges the children of the nobility and of the citizens. Their beginning was a true progress; even their enemies rendered them homage. They had the pedagogical instinct and the taste for the beautiful, for classic, regular and traditional beauty. Yet they did not like novelty; they taught under Louis XV. as under Louis XIII.; they attempt even to-day to hold youth to the old track.

M. Frary does not allow much force to the arguments of his opponents; that the study of an ancient language is an excellent gymnastic for the mind of children; that the knowledge of Latin is indispensable to him who wishes to know French well; that the society of the great men and the great writers of antiquity forms the mind and the heart; that since modern civilization is the daughter of the Graeco-Roman civilization, the best culture which we can give to the new generations is that which we borrow from our masters. For him there is nothing in Latin literature that cannot be matched by something modern. Moliere is as original as Plautus, Bossuet as Cicero, Racine as Virgil; Dante and Shakespeare are more original. The truth is that we learn Latin in order to be men of the world, to enter into a polished and cultivated society. Polite society has its demands. Just as it is necessary to wear black clothing even in summer and an uncomfortable hat in every season, it is necessary to know Latin, or rather to have passed a number of years in the houses where it is taught. It is not elegant to quote Horace, nor even to translate him, but it is almost indispensable to have had some connection with him at the age when down begins to shade the lips. It is the custom, and that is enough.

Society wishes cultivated minds and it is right; but it will have less prejudices as to the choice of the seed which it sows when the day comes when everybody will know that we can labor eight or ten years on the brain of a young man in order to gather something besides Latin themes. It is an experience to be made, for it has not yet been tried.

Whoever demands in the name of the modern spirit the reform of the courses of study is sure to hear it said that we have tried it and have not succeded. What you ask has been done under our eyes and does not give brilliant results. Division of the courses has miscarried; special teaching does not furnish to French society an intellectual élite. At the beginning of the Second Empire, M. Fortoul divided the youth of the lycés into two sections; before the fall of Napoleon III. the work was adjudged condemned, almost abolished. What M. Fortoul took away from the Greek and the Latin he gave to the sciences only; these were considered inoffensive. But neither history nor geography nor the modern languages obtained a sufficient part in the new programmes. It was an incomplete reform, and in many respects absurd.

M. Frary does not believe there is any great advantage to be gained by beginning the study of the sciences before the age of fourteen or fifteen years. The notions which children receive before that fail in precision and clearness. We either impose on them a premature fatigue, or else cram them with ill-digested knowledge which it will afterwards be necessary to coördinate by a more severe method. It is well understood that our pupils ought not to leave college before having passed through the whole circle of regular studies, and that it is not necessary to give them early a universal and superficial instruction. We reserve the right to wait when we find it advantageous, and we refuse to compete with the primary school. But he makes one exception, in favor of arithmetic, or at least in favor of calculation, freed from the complicated demonstrations and the chain of theorems. It is well early to accustom children to handle numbers, and it is often play for them. It is the prolonged reasoning which tires them, and not the calculation, for which many show a surprising aptitude. But geometry, algebra, and the rest should be reserved to a more robust age from which a more sustained application may be demanded.

Many people suppose that mathematics give the habit of correct reasoning and make logical minds; this is a received aphorism, although more than once refuted. But the logic of the exact sciences resembles in no way the logic of the human sciences. The matter, the method, the principles, differ radically. Nothing obliges us to load the minds of children with incomplete notions, nor to transform experiments into childish diversions. Let us say aloud, even to our pupils, that certain studies demand a sustained attention, efforts almost manlike. It is debasing to labor to make of it a recreation.

M. Frary continues: —

Natural history, which consists more in facts than in reasoning, and which owes much to the memory, is more accessible to children, and it is allowable to give them early a foretaste of it, but well done and without pretence; no general theories, no learned physiology, no tasks to be gotten up. We can, without writing or regular lessons, teach them to see, to distinguish beings, to name them. Let us turn over albums with them; let us show them collections, if we have any at hand, and especially engage them in making a herbarium, excellent employment for walks in the spring. The search for plants will exercise their eyes perhaps as much as drawing, which now enjoys so great vogue, and which we pretend to teach even to herdsmen. Drawing is a kind of work, and a painful work for certain minds. Would it not be better to leave to it its former character of an optional study and an agreeable art than to inspire too early a disgust in natures which are rebellious, but which are not on that account inferior? Since I have spoken of walks, may I not be permitted to desire, in passing, that they remain what they should be, physical exercises, and not be turned into lessons on objects, more or less fatiguing to the mind. It is not advised to have children visit machine-shops, studios, museums even, and to have them translate their impressions into little French compositions. But in order that such excursions be not simply wearisome, we must suppose the master to be a genius, upon which we have no right to reckon. Modern pedagogy ends, under the pretext of progress, by demanding of masters qualities as rare as those which Rousseau supposes in the preceptor of Emile.

For a long time everybody has noticed the necessity for giving a wider place to the teaching of the living languages. Formerly this teaching was entirely sacrificed. The fashion was against it, for fashion exercises its empire even in the interior of a college. Excellent pupils, loaded with prizes and proud of their success in Latin, were distinguished in the German or English class by their inattention and weakness. The teacher might consider himself very happy if he obtained only a little calm. If he were a Frenchman, the solidity of his knowledge was doubted; if a foreigner, his accent, the singularities of his style and of his manner exposed him to ridicule. Whatever his merit, public opinion with difficulty decided to place him on a level with his colleagues in classic instruction. Much has been done to remedy this inferiority of so important a branch of study. Lessons in the modern languages begin earlier; the teachers are selected with more care; more guarantees of knowledge and of talent are demanded of them.

The subjects which M. Frary would have in the courses of study for secondary schools are the sciences, natural, philosphical, and mathematical, modern languages, French, history, philosophy, and geography, all from an economic point of view. Geography is evidently one of his favorite studies. He quotes M. Cournot, apropos of geography in 1864, as of opinion that it is, if taught in a complete way, perhaps the most useful of studies; there is none more attractive. He would claim for this study that important place which the principle of immediate and practical utility will one day assure it. Public opinion is to-day wholly convinced of the utility of geography, for futile reasons as well as for serious ones. There are few professions in which geography is not useful. Science reveals its benefits only to those who have acquired them. Industry and commerce have need to become acquainted with their customers, i. e., the world, in order to give to their work the most profitable direction. Geography should help in determining our occupations. It broadens the horizon of young people; it shows them a multitude of careers in which their activity will find employment a hundred times more fruitful for themselves and their country than the bureaucratic professions.

But M. Frary, while hopeful as to the certainty of reform, does not expect and does not wish that it should be rapid. All things come round to him who will but wait.

M. Guerin's book is written, as he says, with a high appreciation of the merit of M. Frary's book, the tendencies of which he approves without accepting the conclusions. He believes there is more to be said, and that the system of ideas he himself has to set forth is at least very suggestive. There is a vague feeling that something should be done to put our teaching on a level with the requirements of the present and of the future, but, so far as we can judge, nobody has hitherto been able to tell precisely what ought to be done. Hence come those timid attempts at superficial reform, those perpetual gropings, the clearest result of which is to kill the faith, as well in the heart of masters as of pupils. How can that be taught or studied with zeal which on all sides is called useless or superannuated? That there is room for reform, nearly everyone agrees. But in what measure and in what direction should the reform work? It is here that the division occurs.

Of the two objects which general education ought to propose, namely: to form the mind and to form the heart — we would prefer to say: to form the character, i. e., the man himself, by the culture of the mind — the more important, the more utilitarian is certainly the second.

M. Guerin quotes liberally from Rollin. But perhaps Rollin may be considered a fossil, for since his day we have had the French Revolution; we are the children of the nineteenth century; we form part of a New World. If so, he will quote from a contemporary, Michelet. Listen a little to Michelet, speaking of Greek and Latin: "Words? sounds? emptiness? — No, realities. Each of these powerful idioms is an individual, a soul, a personality. We leave the world of shadows in which the Middle Ages dreamed. We touch, in Greece and in Rome, solid persons, the strongest that ever lived. The Greece of Aristotle, so small and so great, which at a step has conquered Asia; Rome, which created the Mediterranean Empire, are they creatures of the reason? This reality subsists in their language. Greek is the *agora*, and all the movement of their cities is learned in their language. Latin is always the patrician *atrium*, where the jurisconsult renders to his clients his *responses*, the praetorium of equity which distributes law to the world. Yes, their languages are souls, great souls of nations."

M. Guerin is unwilling to give up the study of Latin and Greek altogether; it may be claimed by their opponents that modern history furnishes as noble examples of men as antiquity. Although it may have been discovered that Brutus was an elegant skeptic, it has not been discovered that he did not die for liberty; that Demosthenes was not incorruptible —which his death belies — yet it has not been discovered that he was not the prince of eloquence, and did not spend his in the ardent patriotism which has immortalized his name; Cicero may have been vain and feeble, but it has not been discovered that he did not deliver the Second Philippic, that he did not save Rome from the conspiracy of Catiline, and that he has not deserved the name of Father of his Country.

These great men and many others had their limitations and imperfections. But does not the sun have spots? And is it less the sun? He believes it well to study in her own writings how Greece in her palmy days showed an activity equal to that of England at the present day; how her colonies spread, like the flowers of civilization, along the shores and the islands of the Mediterranean and the adjacent seas, and even to the banks of the Indus; how at a later day, the Roman name spread, putting its seal upon the conquered nations, so that neither Time, which effaces everything, nor invasions, nor revolutions have been able to efface its imprint; so that in less than two centuries after the conquest the conquered had forgotten their origin and their national languages and had adopted the language, the manners, the laws, the arts, the institutions, of the conqueror. It is these writings which dispelled the darkness of the Middle Ages and brought forward the intellectual Renaissance, the mother of modern civilization.

For us, he continues, Greece and Rome are, before everything else, a school of morals. Morality is not taught dogmatically; it is taught especially by example. Again, even the opponents of these languages cannot help recognizing the excellence of their art in antiquity. The modern era begins with Greek science, so that we may safely call the Greeks and the Romans moderns like ourselves; they form part of the same intellectual cycle.

One question connected with this subject is of an especially pedagogic character. Nothing is more false than to say that living languages, i. e., the modern languages, are instruments of an intellectual gymnastics equivalent to that which the ancient languages furnish. At an age when young men can still draw nothing from their own resources, it is important, in the first degree, to submit them to exercises which, without demanding of them to create something out of nothing, permit them to acquire ideas while developing harmoniously the faculties of their minds; the persevering will, the judgment, the imagination, the taste. Nothing is more proper to procure this result than the translation of passages selected from the best writers in prose and in verse. A good translation is not what self-conceited people think, and all those who have passed through college know well that it is by this sign that good minds are recognized. There must be some difficulty in it. An exercise can be of profit only so far as it costs some effort. In translating the modern languages, it is merely a question of vocabulary. The modern languages being almost equally analytic are translated nearly word for word. How different it is with the ancient languages! These are synthetic languages, admirable in breadth, in suppleness, and in variety, but in which it is not always easy, to our habit of mind, to find the thread of the thought. It is neither without effort nor without genius that we succeed in getting out of the labyrinth. But there is glory and profit in it.

The best claim which the study of the Greek and the Latin languages has to a place in our courses of study, and to the first rank there, is in that it is the best means we have of forming the heart and the mind of youth. If we do not take them for our guides, whom shall we take? Is it the English? Is it the Germans? Neither. They are not our masters; they are at most our rivals, when they are not our disciples.

Jules Simon says: "We must educate our children for our time and our country, but it is not necessary to separate our time and our country from the tradition of the Latin races and from human tradition. In the series of historic facts and in the intellectual and moral development of humanity there cannot be and there should not be any abysses. There is then place for preserving to the Greek and the Latin the part which we make for them to-day, *but to teach them in a different way*."

We believe that those who demand with so much energy the elimination of the ancient languages would rank themselves with us if they did not consider this elimination necessary in order to make a broader place for the teaching of the modern languages. It is with them especially a question of time. If then, by the way in which we mean to teach Latin and Greek, we could show them that we are as much concerned as they, more even than they, in making for the teaching of modern languages a broad place; if, on the other hand, by a profound and rational reform of secondary teaching, we could find the time which to-day fails us in consequence of the incoherent exuberance of our courses of study, perhaps we should have gained our cause.

The usage, not particular but general, of civilized nations which give to the study of these languages at least as much care as ourselves, leaves us no kind of hesitation. Would it be the same if we wished to replace them by one or more modern languages? Which would then have the preference? Is it the English? Is it the German? Why? Is it both? Why still? Why not Italian or Spanish or Russian? Why not the Arabic, the Hindustanee, or the Chinese? For, at a time when the tour of the world is made in seventy-two days, we see little reason why one of these languages should be more particularly useful than another. Will there be an obligation to learn any particular one of these, or will there be a choice? For, to learn them all, there is but little opportunity; the thing is evidently impossible. It is for this reason that Volapük has been invented. And why not learn Volapük? For when we confine ourselves to strictly utilitarian reasons, we do not see why Volapük should not have the preference. It deserves it. We admit that it would not contribute much to form the heart and the mind of youth; but in the opinion of our opponents this kind of utility is evidently accessory. We modestly propose our solution. If it is a suitable one, we shall experience a satisfaction as keen as it is disinterested; if, unfortunately, it should be erroneous, our excuse will be our good intentions. We also seek to do a work useful to our country.

Formerly when people learned Latin they learned it, doubtless, for what it contained, but they learned it also for itself, to speak it and to write it. It was the literary language, the learned language, the language of universal communication between intelligences of high culture, the Volapük of that time. This alone suffices to explain to us the methods of that time which are unfortunately perpetuated to our time and are no longer justified. As they learned Latin to speak it and to write it, it was wholly natural that they should practise above all in writing it correctly, and, if possible, elegantly. Hence this grammatical apparatus which we find to-day so irksome, these themes, these Latin compositions, Latin verses, Latin discourse, Latin dissertation, which formed the glory of the University, — which, sad effect of routine, it perhaps still regrets.

But from the moment when our language became fixed, as much as any language can be, by a great literary period, Latin lost its important privilege of a common language among learned men. Henceforth a change of methods was imposed. Perseverance in the old methods has caused Latin to fall little by little into a deep discredit, and has made it a subject for suppression.

If the Greek and the Latin are for us incomparable instruments of moral and intellectual education, it is because they are the expression of a wise and powerful antiquity, and because this breathes throughout the incomparable collection of monuments written in these admirable idioms. The study of these languages has for its object the understanding of these monuments. Now, to learn how to understand, or to learn how to write a language are two very different things. To learn to write a language, otherwise than by use, is evidently to exercise one's self in composing in that language, and, for this purpose, to overcome all grammatical difficulties. This is the most irksome labor which can be imposed on children. And yet success is to be attained at that price; for before all it is necessary to write correctly. But when it is simply a matter of learning to understand, it is very different. A general knowledge of the declensions and the conjugations, some rules of syntax almost common to all languages; so much for the grammar: a vocabulary reduced to its simplest expression, i. e., to the word itself and its principal meanings, without examples, the reading of the authors and the translation into the French language of their most remarkable passages; that is all.

In suppressing the time which we devote to Latin composition, time, it must be confessed, almost lost, we more than double that which we can devote to the understanding of the authors, which is henceforth our only purpose. We have said, lost time: for, what can a scholar learn to whom we give a page of French to translate into Latin or Greek? How much better it would be to devote the two hours which such a task requires to reading fifty pages of the author, an extract from whom he has just translated so miserably! It is entirely different when we translate from Greek or Latin into French. If the given texts are well chosen, besides the moral and intellectual notions which he will acquire by these means and which will later form his best equipment, the pupil will find in this work a daily opportunity to exercise his best faculties. It is not an easy thing for minds habituated to the analytical order to seize in the most delicate shades the meaning of a serious Greek or Latin text. It needs a sustained attention, sagacity, logic, and when we have succeeded in grasping the meaning and the beauty of the original, it needs not a little taste to render it into French in a manner, we do not say adequate, but merely approximate.

As French is largely an offshoot of the Latin, so are Italian and Spanish. All have nearly the same vocabulary and, in general character, the same grammar. To study one is to study the others. It is no more difficult to learn at once several languages of the same family than to learn one alone. If Latin should be given up for modern languages, which would be the most expedient to choose and to make our secondary teaching gravitate around? The answer is not easy. Is there one of them of such superiority to the others as to impose itself upon them? Must commercial utility alone be sought? If so, will not one person have an interest in learning one language, another person another language, according to the direction of his business? Let the Latinophobes decide if they can.

We believe in the necessity for the study of modern languages. Since Europe is still too divided and too ignorant of its true interests to adopt one language — the easiest to learn — which by common consent should be taught in all the schools and which would thus become a language of great international communication, we are reduced to study several. With which should we begin? Undoubtedly with those of our neighbors who belong to the same family, those which are spoken by people of the same origin. We belong to the Neo-Latin group. We have this advantage, that the language which serves for the base of our secondary teaching is, in respect to these, a mother language and assists us wonderfully in the profound study of our own language and the sister tongues. A prosperous future is reserved for them if they know how to unite. Such as they are to-day, they represent a considerable population, at least one hundred and twenty million souls, if we include Brazil and the Spanish-American republics. For these are destined to an immense and prompt development, especially now that emigration is turning from North America to South America.

[It is very suggestive as to the choice of a modern language to be taught in the schools of the United States to consider that from the Rio Grande southward to Cape Horn, Spanish is the overwhelmingly preponderant language — with the Portuguese in Brazil — while north of the Rio Grande, with the exception of a few millions of French in Lower Canada, English-speaking people are almost as preponderant. M. Guerin's words should have some significance for us in this connection.]

It seems to us that the partisans of the study of modern languages have no longer any serious reason to demand the elimination of Latin, since, thanks to it, we can render ourselves masters of the modern languages which it most concerns us to know. A living language it is necessary to teach as a living language; but in the case of the ancient language it is not necessary to learn to write it, but to learn to understand it. For the Latin and the Neo-Latin languages let the grammar be reduced to the simplest expression, regular declensions and conjugations, rules of syntax; all irregularities or exceptions left to the explanation of the master; finally, a well-made vocabulary. As exercises: the translation into French of the finest passages; extensive and thorough reading of authors, from an etymological, philological, literary, historical, philosophical, and scientific point of view; so that when the pupil arrives at the end of his studies he has passed through the whole field of Latin literature.

Outside the Neo-Latin group of nations there are two which we may consider more particularly as our rivals in the sphere of intellectual and economic activity, the English and the Germans. If we could impose the teaching of the two languages our problem would be solved in advance. But in case it were necessary to choose, to which would we give the preference? If we decided this only by the intrinsic value of the language, by its organic worth, if we might say so, we think it would be necessary to decide in favor of the German. German is spoken in Europe by a greater number of people; we are in immediate contact with them, we have a capital interest in knowing what is done among them. Although their literature is not as rich in works of the first order as English literature, it nevertheless counts illustrious names, it abounds in works of detail; German is to-day the language of erudition. But the German is a difficult language. Sister, and not daughter of the Latin, it is more complicated and less analytic than the Neo-Latin and than the English itself.

The English is the most recent of the modern languages. It has neither the originality nor the homogeneity of the German. An image of the English race, triple or quadruple mixture of Bretons, Danes, Saxons and French, it is only a kind of compromise between the languages of the last two dominant nations, the Saxons and the Normans. But despite its intrinsic defects a language ends always by being worth what the people who speak it are worth. Now the English people, perhaps because it bears in itself the synthesis of several races, is a people of high intellectual and moral worth, of a prodigious variety of aptitudes. It has expressed this high value in its works. In every department of intellectual activity we can count a legion of writers, and the source of the English genius is not exhausted. The grammatical simplicity of the English language, its half-French vocabulary, the logical construction of its prose, so analogous to our own that when we are slightly familiarized with the meaning of the words we can easily translate any page of the classics with sufficient elegance, the community of origin closer than we think, the richness and the beauty of its literature; these are many of the motives for us to place the study of the English language immediately after that of the Neo-Latin language.

But there is one motive, of economic value, which would suffice alone to make the balance incline in its favor. Besides that English industry and commerce are the most important in the world and that we meet them on all shores, two continents, North America and Australia, belong to the English language; they conquer for their profit the floods of emigrants of every origin who go to lose their identity in these vast countries, and Europe seems to produce only for them. In the near future it is by hundreds of millions of men, the most industrious, the most intelligent, the most energetic, that the English language will be spoken; it will some day be the dominating language of the globe.

After it, among the languages of modern Europe, the Spanish will hold the first rank. Neither the German, nor the French, nor the Italian can extend further, except as literary languages. They have no colonies where the race can develop itself while preserving the language of the mother country. There is but little for their emigrants except foreign countries which absorb them and assimilate them. The first generation arrives French or German or Italian, the second is already Chilian or Argentine or Brazilian or Mexican or Peruvian or American or Australian; that is to say, of the English or the Spanish language. Therefore, if we were reduced to choose between the English and the German we think, from all the reasons we have stated, that the preference should be given to the English.

When we examine attentively the programmes of our secondary teaching we are struck at the same time by their incoherence, their extent and their minutiæ. We see, without difficulty, what their history would prove, that they are formed of pieces and parts, without obeying a high directing thought which would have concentred and circumscribed them in view of a purpose clearly conceived and determined. Around the ancient languages, which formed with a little history, rhetoric, and philosophy, the basis of the teaching of the ancient university, have come to group themselves, according to circumstances and the fashion, the mathematical sciences, the physical sciences, the natural sciences, the moral and political sciences, history, geography, philosophy, with an infinite detail. Each of these sciences seems to have wished to engross for itself the whole place; each is taught by itself and unites with the others or arranges itself with them as it can. A system of education which leads a young man to eighteen or twenty years of age without leaving in his mind anything but bits of various sciences ill-bound, ill-coördinated, and ill-digested, is surely a condemned system, for it answers satisfactorily none of the needs which such an education should satisfy. What are these needs? That is precisely what should first be determined.

But here the subject widens. The reform of secondary teaching cannot be made singly: it is the conception of a system as a whole, proceeding from a single principle, which has too often failed here and which has rendered almost sterile the efforts attempted for the reform of teaching. It is this single principle that it is necessary to get free from; for it is only thus that the organization of public teaching can be brought to a logical and rational system.

Besides the study of the methods invented by humanity to express its sentiments and its ideas, and which are, so to speak, only so many forms of language, such as music, drawing, writing, calculation, — methods, the last two especially, of universal utility, — teaching, *at first*, *general*, should have for its object to raise the individual from the state of primitive ignorance to the state of civilization at present attained by mankind, by making him pass through the series, more or less abridged, of the developments of the species. It is only after having satisfied this first need that it is necessary to pass to another order of teaching, — *special*, that is to say, professional teaching.

These two kinds of teaching should remain profoundly distinct. To demand of general primary teaching or general secondary teaching our preparation to earn our living is to confound the general, that which has for its purpose to form the man, with the special, which has for its object to form the artisan or the practitioner. It is this confusion which, in our opinion, is the principal cause of the vicious organization of teaching not only in our own country, but nearly everywhere. Let it be sufficient for us to have established that there should be only a *reduction* of the general secondary education, and that it should be completed by a special or professional teaching appropriate to the needs of an industral society as advanced as ours.

M. Guerin then proceeds to give a sketch of a system of education fit to succeed that which we now have, involving the history of human development. The history of human development, taken in its generality, may be divided into as many chapters as there are distinct forms of human activity. But first, in a preliminary chapter it would be well to study man in himself, to determine in what he differs from other animals and in what he resembles them, what characterizes him especially and makes of him a being superior to the rest of nature. We might after this pass to the different forms of his development and trace successively, in a series of chapters, the history of language and of thought, the history of the industrial development, the history of the artistic development, of the religious and philosophic development, of the social development, and of the scientific development. Later he shows how each of these chapters should be developed. They are interesting reading covering as they do, in the brief space of little more than two hundred pages, the cycle of human knowledge. They are full of suggestions as to what might be taught; they do not purport to be courses of study.

The method outlined is worthy of attention, because, whether we agree with the critic or not, we cannot help feeling his enthusiasm in a great cause. In conclusion he makes a resumé, some of the points of which are, in brief: —

The question of the reform of secondary teaching is at bottom, *an economic question:*

The struggle for existence becoming more and more eager, not only between individuals but between nations, it concerns equally the prosperity of the state and that of individuals, that each one should be as well armed as possible in order to sustain the struggle without disadvantage:

It is important that, besides the *general education*, which gives to man his maximum worth by cultivating harmoniously his physical, intellectual, and moral faculties, each one should be provided with a special or professional education as solid and as complete as possible:

Our present system of secondary teaching does not respond to this double need, because it was made for other times and other social conditions:

To all should be given what is equally suited to all, that is, general teaching:

To each one should be given what is especially suited to each, that is, special or professional teaching:

This is a question of time:

As secondary teaching occupies nine or ten years, from the tenth to the twentieth year, leading to nothing in a professional point of view, it seems necessary to *reduce the duration* of general secondary teaching so as to leave a place for special teaching. [This is in view of the fact also that the military law of France requires the service of every Frenchman from the end of his twentieth year to the end of his twenty-third year.] The subjects taught should be the Greek and the Latin languages, French, Spanish, Italian, and modern Greek ; English also should be obligatory, and, if possible, German. These should be taught by the method sketched above. This will give time for the scientific teaching just outlined, not abstract, but concrete, and time should still be left for the professional or special teaching which may crown the work.

Although the conditions of life in the United States are different from those in France, yet so intimately is the brotherhood of nations bound together, so alert is each to profit by whatever another may possess of best, so essential is it for the teacher to keep himself informed of the trend of thought in regard to his line of work, that, although he may not accept any of the conclusions to which either M. Frary or M. Guerin has come, he cannot help being profited by the careful and thoughtful reading of these two works, and will, perhaps, have a more intelligent sympathy with Frenchmen who are striving in so deserving a manner to restore to France her prestige by the proper education of the people.

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*ENGLISH LITERATURE IN THE SCHOOLS.**

S. THURBER.

In lieu of all further disquisition on the importance of the study of English literature in the schools, I would ask you to note the singular good fortune that happens to this branch of education, in that it is pleasing and welcome to all classes of our fellow-citizens. English literature, in the large sense, is the expression of the English mind on the most serious concerns of life. Another expression of the English mind is the Anglican church, of which Americans have, from the earliest days, been extremely distrustful. Our ancestors came hither, bringing all sorts of animosities against the ways of seventeenth-century England : but they brought no animosity against English letters. To their descendants it has never seriously occurred to break the continuity of English literature on the two sides of the Atlantic, and to imagine it a fine or a possible thing to set up a better literature that should be American. We cannot alienate our equal rights in Shakespeare, Milton and Wordsworth. In fact, English literature is just as much our possession as it is an English possession. It combines in a substantial unity two great peoples, who yet sometimes imagine their commercial interests diverse. It is an agreed meeting-place for all the elements of our own population. Children and adults, of whatever race or religion, pay it the homage of willing devotion, being drawn to it by its power to charm, to console, to elevate. It is almost the one study in our schools that has the right to hope for continuance beyond the years of school into the leisure of later life. I do not hesitate to say that in the study of our literature we are to find our chief reliance for a bond that shall unite the heterogeneous elements of our people in a national consciousness. Adherents of all churches, members of all parties, dwellers in all corners of our vast territory, read the same books: their thoughts are led in the same direction; and this direction coincides with Saxon race traditions that link us to an immense past and warrant our hope of a great future.

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English literature in education is almost a new subject. The high schools, indeed, had long put the *history* of literature in their programs: but even the high schools seldom brought the authors into their classes as systematic objects of study until within ten or fifteen years. Long before that time Milton had been parsed and analyzed; the fine speeches of the orators and of Shakespeare had been declaimed, and elocution generally had entered into its rights; Watts on the Mind, and Butler's Analogy had been duly studied for edification; and we who are in middle life remember that the reading-books of our youth were classical and good, and that we picked up from them scraps of excellent literature. But the class-room study of the great authors in their works themselves, for their own sake, without special regard to elocution, to parsing, to religious or moral discipline, is a feature of these last years, — of these years that have seen such wonderful expansions of education in all directions.

As a new subject, therefore, English literature in the schools preëminently needs discussion. The zeal which young teachers are applying to instruction in English needs guidance; and the proneness of old teachers to use, in a living language and an interesting literature, the methods to which they have become wedded in dead and fixed languages and literatures needs chastening and correction. The aim of literature teaching needs to be ascertained, and the modes of procedure examined. The qualifications of literature teachers need to be more wisely and liberally apprehended than they have been hitherto. The selection to be made for school purposes from the boundless range of writers needs to be debated, and a canon of fitness to be settled. The adjustment of the various portions of suitable literature to the various stages of the pupil's development needs to be carefully thought out. The proper combination of the stataric and the cursory methods of reading needs to be more intelligently comprehended in theory and more fruitfully reduced to practice. The problems of literature teaching that press for solution are among the most interesting educational questions of the day. No English teacher but has his mite to contribute to the discussion: no English teacher that has caught the spirit of the time but takes as his motto that verse of Chaucer, — "and gladly wolde he lerne and gladly teche."

As the primal law of all literature teaching, — the most fundamental of all the principles on which such teaching should rest, — I submit the simple thesis, that it should be interesting. By this I do not mean that the teaching of English literature should be made attractive by sagacious devices that might lend to it adventitious charms amusing to youth. I mean that the teaching of literature should be so ordered as to be inherently interesting by virtue of its power to come into touch with the best instincts and the most generous aspirations of the juvenile mind. This is no chimera. Far below, above, beyond those mental regions that are reached by the weekly or the Sunday newspapers, the Youth's Companions, and the whole tribe of juveniles that flood our homes, there are in the youthful soul depths, and heights, and distances to which only beautiful and impressive writing has the power to penetrate. The solicitations of the busy world about us are towards secularizing everything in education. Now and then some one is moved by the spirit of the age to urge the introduction of the newspaper into the schools as reading matter. Now the newspaper is all-important. What banks have last failed, who is elected governor, where the fire was last night, we are all eager to know. There are moments when the newspaper thrusts aside all other printed matter and usurps our attention. And yet the newspaper is not inherently, vitally, morally, perennially, interesting. The newspaper is in no sense whatever literature. The very essence of literature is that it is not ephemeral. In each period of the history of our race a few great writers have given beautiful expression to the aspirations, the beliefs, the convictions, the passions, of humanity; and not only did these utterances charm the men to whom they were spoken, but they have continued to satisfy succeeding generations and have become woven into our language and accepted as our maxims of life. Many men have good thoughts and noble emotions: but to only one or two in a generation is it given to clothe in moving forms of beauty the thoughts and emotions that many cherish in speechless secrecy. Literature gives voice to what is already within us. It gives voice and consciousness of ownership to what was latent in the child; and this is not information or skill: it is character. The youth is by nature a potential inheritor of all the spiritual achievement of his race: it is our function to see to it that he becomes, according to the measure of his capacity, an actual inheritor and possessor of this achievement.

We shall make the study of literature interesting by selecting the most stirring and kindling passages that express the primal conceptions of duty, heroism, self-sacrifice, courage, patriotism, faith, purity, love of nature, kindness, parental and filial devotion. Every child has in his soul the chords that respond to these touches. The essence of religious teaching is involved in these themes. Without dogma, without the least occasion for mistrust or repulsion, the poems and stories that exalt the fundamental virtues go straight home to the young bosom, and, fertilizing the germs of spiritual and moral conviction, wake into life the dormant, dimly apprehended principles of conscience.

Our literature abounds so richly in works possessing this vital and seminal power, that it is not possible to do more than name a few instances of writers that may illustrate my meaning. It is not necessary to search for recondite authors. The mature student of literature is perpetually finding delicious specimens in one field or another, and inserts them in his florilegium. But the books and pieces best suited to introduce the young to good reading will always be the familiar ones. Those verses that everybody knows are the ones most deserving to be known of everybody. The very fact of their universal acceptance warrants them as having a special virtue, a directness and happiness of phrase, a simplicity, a rhythm, that commend them to the average man. The poets who are nearest to us in time and place are, by special good fortune, the very ones best fitted for the literary studies of children. Longfellow and Whittier should be text-books in the grammar schools. Excelsior and the Psalm of Life are perfect specimens of school texts. They can be easily committed to memory and declaimed. They have a meaning, not instantly obvious, which grows upon the youthful insight and gains acceptance with further acquaintance. But the same may be said of much of Longfellow's work. Far from a great poet, he is eminently the poet of the young; simple, clear, melodious, intelligible to the average mind. Whittier, more rugged and homely, is the poet of the domestic and civic virtues, the very embodiment of the principles that make the foundation of American citizenship. A good text-book of civil government is Whittier's poems. There is nothing in all our literature so exquisitely adapted for study in the last grammar school year as Snow-Bound. First, it is not altogether easy, and *needs* study, with a wise and sympathetic teacher to guide and help. Whittier's rimes are far less facile than Longfellow's, but his movement is nobler and graver; and the discipline of studying such poems as these, in which moral earnestness so conspicuously dominates literary form, is essential in an education in English literature. Then Snow-Bound takes us out of the secular life of to-day into an actual past not too remote, and into a landscape close at hand and familiar. The young imagination grasps it all. Here are domestic peace and concord, filial respect, the ties of family and neighborhood, all pictured in an environment of simple, laborious primitive country life, where contentment reigns and modern ambitions are unknown. Lowell's Sir Launfal is good in another way. Much of our poetry is allegorical, and so offers to the young student of it something like problems to solve. It is an excellent discipline to undertake in class the interpretation of allegories whose sense is high and stimulating. Sir Launfal first engages the interest with its beautiful summer and winter pictures, and its story of the search for the Holy Grail: but then, — for what truths in our own souls do these pictures and these stories stand? We must not teach dogmatic religion: we hardly know how to teach morals: but why need we be concerned at either of these disabilities when we can let our children chant the perfect verse of Sir Launfal, and then, step by step, grope their way to a setting forth of its moral and religious teaching? Still more decidedly allegorical are such poems as Whittier's Vanishers, Emerson's Forerunners, and Tennyson's Lady of Shalott, which will prove abundantly mystifying at first. This very mystification is a good incentive and stimulus to thought. Nothing more pleasing to the interested teacher than a class thinking and offering surmises all their own: nothing more hopeless than a class all primed with notes and rendering faultless answers to faultless questions.

Thus I have tried to illustrate what I mean when I say that literature teaching should always be interesting. We should choose our authors and pieces with pedagogic skill; considering what chords exist in the growing mind, all ready to be stirred, and what keys, in the great instrument that our literature is, we shall touch to set those chords in vibration.

I leave it for those who are skilled in primary teaching to say in what shape reading matter should be presented to children under twelve. But above that age I do not hesitate to say that all class reading of poetry should be distinctively a study of literature, and that the names and personalities of the authors should be brought into the consideration, so that gradually the child may gain an acquaintance with a few important writers, and come to associate them correctly with their works. It is entirely possible to make Longfellow and Whittier text-books in school. Think of the inestimable advantage to a child of the possession of these writers during two or three years of his school life. He recurs to them, not merely when he gets his lessons, but also when a vacant moment gives him a chance to seek a little recreation on his own account. The reading-book we have known for many years, with its commonplace of all sorts, is of little consequence as a factor in education. An acquaintance with the better half of the writings of a few great writers is of all consequence. The book-market to-day renders quite feasible all that I suggest in the way of a reform of our school reading. In poetry, I would have the well-known single-volume Longfellow and Whittier, — at least these. Then I would have, in a single volume, if possible, — though I fear I should have to put up with divers little booklets, — a selection from Lowell, Holmes, Emerson, Tennyson, Wordsworth and Scott. These three books should take the pupil well into his high school years. Then should come a book including what is needed of the other poets of this and the two preceding centuries. Hales's book, far from satisfactory in many important respects, may illustrate my idea. In the last high school years Milton should be read entire, Shakespeare in abundant selections, and Chaucer in the well-known popular extracts of Morris and Skeat. The larger ambition which is leading a few secondary teachers of English to range a little in the pleasant fields of earlier English, I most cordially approve; and I can only congratulate such teachers on the very exceptional opportunity which their English work is so fortunate as to enjoy.

When I recommend giving young people entire volumes of Longfellow and Whittier, I do not by any means intend to hint that all the contents of these volumes should ever be assigned as lessons or read in class. The teacher must select with infinite care those pieces which are fittest for the pupils' intelligence and which do not imply more experience of the world than the pupils have had. The volumes will serve the purposes of the two kinds of reading, — the stataric and the cursory. A piece that is short and easy can be committed to memory and declaimed; paraphrased and interpreted; the words studied as to meaning and pronunciation. This will be stataric treatment. Many more pieces, especially the longer ones, may be assigned for home reading, with the view of examining results by skilful questioning. In this way much ground can be covered. This will be cursory treatment. Still other pieces can be left wholly unnoticed. These the learner may read or not, as he pleases. Perhaps this voluntary reading is the best of all. I have often thought it must be a delightful sensation for a pupil in a modern city school when he gets a chance to read something that has not been assigned him, and on which he is not to be examined.

The school time that may be given to literature must of course be shared by poetry with prose. Here the rule applies, as before, that whatever is prescribed to youth to read must be interesting to youth. Our child of twelve eagerly reads stories and histories. He finds more or less satisfaction in the multifarious stories of the juvenile papers. From stories he cannot be weaned, nor should he be. Stories are his natural pabulum. I do not see how the school can exert much influence on the young child's miscellaneous reading, unless either the school accumulate a pretty large library of good story books and give them out according to some clearly conceived principle of adaptation, or unless the school put itself into relation with a good public library, whose officers shall give out books on a system arranged in consultation with the teachers. Attempts at establishing a canon of juvenile reading-matter have been made, and certain librarians have studied the problem of coöperation between library and school. But the problem is still unsolved, and, practically, our youth get access to a mass of very weak reading that fails utterly to enrich their stock of ideas, to cultivate their imagination, or to form their taste.

It will naturally occur to you that of modern prose writers Hawthorne is peculiarly adapted for stataric use in the school-room. His shorter stories are for this purpose excellent. Irving also furnishes a few admirable chapters. From the historians and the orators, selections of eloquent passages occur to every mature reader. These would oftenest bear upon patriotic themes, and would stir young hearts and invite declamation. The multitude of reading-books is so great that I hesitate to say that there is no volume containing specimens of our great prose such as I have outlined. I happen to know of none such. The stataric prose reading-book should contain nothing from writers of no note. Each passage should be distinctly the work of a recognized classic. The young reader will recur again and again to passages that have gained his ear and enlisted his sympathies. As he does this, he should know that he is perusing the words of Webster, or Patrick Henry, or Everett, or that he is making further acquaintance with Irving or Hawthorne. He should be familiar with the portraits of these men; he should know when and where they lived, and how they influenced the reputation and the destiny of their country. Thus he learns the history of literature, and will some day find the study of this history interesting and fruitful, because he has already appropriated much of its detail.

But by far the larger portion of the reading of prose that young pupils will do will be cursory reading, not immediately under the supervision of the teacher. A good plan is to have a sufficient number of copies of some entertaining book to go round, and, when the book is being read by all, to have exercises of a conversational kind, in which each has an opportunity to ask and to answer questions. After a vacation each pupil can report what he has read: good choices can be praised; pupils who have read the same book can be set to questioning each other as to the story in any of its bearings. The recitation hours are too short and too few to allow the reading of extended stories in the class. But conversation that brings out the relish with which certain pupils have read something good inoculates the rest with desire to read the same thing; and what the young people really desire to do, nothing will usually hinder them from doing. In these conversations the teacher will find his opportunity to show what constitutes a classic, like Robinson Crusoe, and what a merely interesting book, like Ben Hur. The occasions for instruction arise in abundance in such exercises. Pupils' tongues become loosened; they reveal their tastes; they open their minds to advice.

In the middle and upper high school classes the great classic prose of the mother country will furnish the material for study. The novels of George Eliot, Dickens, Thackeray, and Scott, and many more, will be found to be getting attention without much prompting from the teacher. The prose of Macaulay and Ruskin, however, will need careful examination in the stataric manner: so will at least that of Burke, Goldsmith, Johnson and Addison in the eighteenth century. and that of Dryden, Bunyan and Milton in the seventeenth. These writers all have marked individuality of style, and each remains forever conspicuous for some great quality that makes his work recognizable wherever it is found. Moreover, each of them wrote books, or, at least, passages, still of interest for their matter. For stataric treatment a very small selection must be made, or we shall run the risk, while we seek to teach many things, of teaching nothing well. In naming nine great prosaists, I have rather named too many than too few. The enthusiastic teacher will miss from my nine, Cardinal Newman, Matthew Arnold, of the moderns; Gibbon and Swift, of the eighteenth century men; and Clarendon, Burton, Fuller, Bacon, Ascham, of the older worthies. It is necessary to respect the limitations of time and opportunity, and those other far more important limitations of the juvenile capacity. A severe renunciation is one of the first lessons that the wise teacher learns. He who has regard for fruitful results rather than for the completeness of his program, will adopt the maxim, "the half is greater than the whole."

The prose writers must of course all be read in carefully made extracts. The books exist, though in small single volumes, giving more than is needed and not always just what is needed. The publishers' lists now leave no corner of our literature unrepresented. There is no occasion for scanting the opportunity of high school pupils to become acquainted with the English masterpieces. Wise selection is the main thing. Selection, cutting, mutilation, excerpting should be practised without regard to the artistic value of wholes, except in the case of works of small compass or peculiarly marked unity of purpose. Even the great poems need not be spared. I could wish for an abridged Milton: even from the plays of Shakspeare portions can be dropped without marring the essential unity of the dramas and with the effect of greatly enhancing their pedagogic value. The *reverentia pueris debita* is a higher principle than any law of æsthetic or literary integrity. The contempt which scholars who are not teachers are wont to express for Bowdler and bowdlerizing need not deter us from doing in this matter what is right.

In my experience as a teacher of literature, I find absolutely no occasion for using a text-book of literary history or criticism. Nor do I find any editor's notes useful in my pupils' hands. You will please note that I say I find notes not useful in my *pupils' hands.* I do not say I do not find useful in my own studies such annotation as competent scholars have given us in their editions of the classics. Why admit this, that, or the other nobody to come into your class and speak for you? The pedantry of editing has grown of late silly and fatuous. I believe I do not speak as a cynic, but solely as a teacher. Given a text so thoroughly annotated that all its possibilities of questioning are settled and cleared at a glance, and I do not see what remains for me as a teacher except drearily to call next, next, while the class read the text in recitation, except, of course, that even then I may correct elocution and pronunciation. I once recited rhetoric and history to professors who let me commit the books to memory and say them off. After me the next fellow took up the recitation, and so it went on. But that was in college and more than thirty years ago. I confess I am too nervous for such a monotonous procedure. The beauty of a question is that it provokes speculation and inquiry and elicits wrong answers, not that it matches certain recently gained information and is answered right. Stupidly right answers and stupidly wrong answers are precisely equal in value, and are equivalent to that other occasional phenomenon of stupidity known to the class-room, the no answer at all. Intelligently wrong answers and intelligently right answers are also equal in value, though the intelligently wrong ones are usually the more interesting, because they set up targets for comment and show where the teacher's annotation is needed.

The chief function of the pedagogic editor of modern texts should be to select and expurgate. He should contemplate schools possessing dictionaries, encyclopædias, histories. I recently saw a book presenting an English text, whose editor vaunted in his preface that his notes mades it possible to dispense with all books of reference. Much rather, I submit, ought the existing profusion of cheap books and free libraries to make it possible to dispense with all notes. In the older texts, as difficulties arise that require reference to more recondite books, notes first begin to find their useful function, and in Chaucer and Piers the Plowman, we accept them perforce.

While all this work of stataric and cursory reading of well chosen English texts is going on, still other exercises of many kinds should be kept up, both for the sake of variety, and for the purpose of bringing into view, at least in some slight measure, the writers of less note and the odd bits of literature that, although very impressive sometimes in themselves, do not always belong to the famous names. It would be a pity, for example, not to take note of the Bells of Shandon, the Raven, the Owl and the Pussy Cat, the Old Oaken Bucket, the Vicar of Bray, the Song of the Shirt, How the Water comes down at Lodore, Guild's Signal, the Gettysburg Speech, My Captain, various old ballads, — which I name merely as chance specimens, without thought of particularizing. Such pieces are infinite in number. To collect their titles and to secure the books in which they are printed is a pure delight. These books constitute a numerous class. I may specify Misses Brackett and Eliot's Poetry for Home and School, the three volumes published by Ginn & Co. under the title of Open Sesame, Mr. Henley's Lyra Heroica, Palgrave's Golden Treasury and Children's Treasury, Emerson's Parnassus, Whittier's Songs of Three Centuries. These and many more such can be had for small outlay. At each recitation one pupil may read or recite a choice selection from this class of pieces. Such reading may be made extremely pleasing, and comment by the teacher may add edification to pleasure.

In the more advanced high school classes I have found a stimulating exercise to be the following. I name some thirty or forty writers, all of note, from the Elizabethan period down to the age of Ruskin and Tennyson, Holmes and Whittier. Strictly limiting themselves to this list, the pupils privately search the works of the writers named for notable and characteristic passages, such as may be read in five or six minutes. For this search I allow a week or two. The passage selected, the pupil copies it in her blank book with all possible care and neatness, not, however, affixing the writer's name. Then we open each recitation with what we call a *mystery*. A pupil reads to the class her selection, then drops her book and stands before her mates in the attitude of one challenging the rest to name the writer. Those who recognize the passage from acquaintance with the author must remain mute, while the rest offer surmise and opinions, and, so far as they can, give the grounds of their judgments. During the reading all have listened, watching for clews. These clews concern the questions whether the writer is English or American; whether he belongs to this century or to the eighteenth, or to the Elizabethan age; whether he appears as a lyric or a didactic poet, as a historian, an essayist, a novelist, or a preacher. Clews of style are also caught: this sounds rugged and intense, like Carlyle; this, sententious and oracular, like Emerson; this, forcible, clear and earnest, like Macaulay; this, periodic and fervent, like Ruskin; this, balanced and antithetic and swelling, like Johnson; this, elaborate and choice, like George Eliot. This must be Wordsworth, so linking the human soul and its interests with the phenomena of nature; this must be Gray, so dainty in its perfect metric form; this must be Herbert, so strange and quaint in metaphor, so devout in piety; this must be Tennyson, so rich and majestic in diction, so enchanting in rhythm and rime. The pupil who has read the piece stands and answers *no* to each wrong guess. The teacher frowns upon surmises that are plainly far astray, commends those which are judicious, suggests fresh clews, and is often as much mystified as the class. Finally some one names the writer, the tension is broken, the mystery cleared, and all have had a literature lesson more fruitful and memorable than anything could possibly be that had been assigned and prepared in advance.

The teacher of literature is usually, I believe, the teacher of composition also. In the latter capacity he naturally considers what writers are apt to react most effectually upon his pupils' style as models. Writers of prose whose English is to be studied as an example of rhetorical excellence must of course be modern. English prose has grown, from what it was in Milton's and Clarendon's time, to be what it is to-day, by shortening its sentences and simplifying its constructions. Nineteenth-century English must be our study. The great prosaist of this century is, of course, Macaulay. In this country we have our own worthy exemplar in Hawthorne. These writers have, fortunately for us, produced works that, by virtue of their content, are supremely interesting to youth. Macaulay is the better of the two for the older pupils. Macaulay's paragraphing is a great study. The art with which he makes his transitions, introduces his topics, holds our attention while he develops them from sentence to sentence, and leaves us in curious anticipation of what is coming next, is phenomenal in modern writing. Macaulay is superbly correct; that is, his sentences show invariably such deference to strictest grammatical rule and usage, that the reader never loses his hold of the thought, or has to make conscious effort to find his way through the construction. Macaulay is always clear and forcible: and these are precisely the qualities which our pupils in their writing most lack. Hence, I recommend the study of Macaulay as a concrete study of rhetoric; and I would dwell upon his English largely on this account. Newman's prose also has the marks of greatness; and I wonder it does not occur to some one in quest of a chance to make a book to compile selections from his Parochial and Plain Sermons. Of this I am sure, — that the way to achieve a good style is to associate with good styles, and not to study the rhetorics.

Before bringing this paper to a close, I would speak a word on the qualifications of teachers of English literature. As things go in our schools thus far, one can learn arithmetic, geography, physics and Latin, — enough to teach them, — in the days of school and college. Latin teachers long ago abandoned the ambition to master Latin literature: they found the labor unrewarding, uninteresting, undemanded by public sentiment or professional pride. They and their works are our greatest danger. The danger is that we imitate the classical teachers and become mere pedagogic grinds in the elements of language and in one narrow round of authors and their works; that we cease to advance, as classical teachers have ceased to advance, and forget that our subject, unlike the ancient languages, is not peculiarly the property of school men, but has its own direct relations to life irrespective of its relations to pedagogy. In a literature that no longer grows, the teacher learns not to grow. In a literature that lives and enlarges, the teacher has every incentive to expand. The English teacher should be well read in his subject. He cannot begin by being well read, but he should constantly advance towards this goal. Wide knowledge of English literature is attained only with time well spent. This kind of knowledge is a slow accumulation, and can be nothing else. The habit of unremitting reading is our first condition of growth.

Especially in English is it needful to warn young teachers against the evil effects of studying their subject in such books as we give our pupils for school use, and which have come to be denominated *text-books.* The teacher remains in his nonage who gets his knowledge and opinions from such sources. Nothing will suffice the student but the originals themselves. Criticisms of writers, such as appear in manuals of literature, often poor in themselves, are worse than useless when taken instead of direct acquaintance with the writers. You cannot possibly know Shakespeare in any other way than by direct reading of Shakespeare's plays. And you cannot know Shakespeare well enough to conduct a class through two or three plays, without familiarity with many plays. You cannot teach literature by repeating things you have read about literature. You must be at home in the great authors. University extension lectures and Chautauqua lectures are a delusion and a snare, if you let them take the place of long and earnest explorations in the original books. Lecture-fed students remain in a low dilettante, dabbler stage of scholarship. The literature teacher's library should be a collection of the English classics, and this library should be unceasingly, lovingly and reverently used. Only the teacher who is ever growing in knowledge keeps up his spirits, his fertility of resource, his power to communicate enthusiasm.

SOLUTION OF ALGEBRAIC PROBLEMS,

*or the Theory and Practice of Forming Equations.**

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AROUND algebraic problems there seems to hover a mist enveloping the subject and causing it to assume, to the novice, vast but vague proportions, and also inspiring him with no little respect for the one who can tear away the garment of mist and analyze, member by member, the figure thus enshrouded. It would seem as if there was no very strong desire, on the part of those who have explored within the mist, to impart to the novice as clear a conception of the subject as they themselves possess. They seem rather to seek to exalt their position by inculcating the thought that the genius necessary to grasp and comprehend the subject is given but to few and that, while they pity the ordinary mortal, they are nevertheless unable to convey to him that which they have seen and heard. It is generally asserted that no rule can be formulated for the solution of problems in algebra.

The consideration of the position of the pupil on entering problems involving equations, the question of the benefit of problems, of the aids offered to the pupil and of the result of those aids, will lead us to the conclusion that there is need of the formulation of some definite method. In endeavoring to reach and enunciate this, we shall consider the following points: — the analysis of problems, their expression, the method of forming equations, a series of formulated questions, some illustrations, the universality of application, and the answers to some objections. Having thus outlined our task, we are ready to enter upon its discussion.

Position of Pupil on entering Problems.

Before entering upon problems involving equations, the pupil is supposed to be thoroughly familiar with the method of solving the equations which have been presented to him; on entering problems, he is expected to learn to *form* the equations for solution.

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Benefit to be derived from Problems.

To discuss all the benefits to be derived from problems would be foreign to the purpose of this paper; but we unhesitatingly declare that, if the pupil is to derive any benefit from problems, he must master the only point in which they differ from equations: or, stating it negatively, if he does not learn to form the equations, he fails to derive any benefit from problems.

Aids to Solution.

There are two forms of aids by which the pupil is supposed to be assisted in this, to him, new art; viz., precept and example, or suggestion and illustration.

In precept or suggestion, he is told:—

First, that he must depend, largely, upon his own skill and ingenuity. Where the rest of his dependence is to be placed, deponent saith not.

Secondly, that, while x will usually represent the desired quantity, oftentimes it is better to let x represent one of the other unknown quantities. This exact information he carefully treasures and rigidly puts into practice.

Thirdly, that he must form an equation consistent with the conditions of the problem. Note that the way to form an equation is to form an equation.

From the first suggestion he vainly tries to draw any aid or comfort. From the second, he infers that x will represent the desired result or it will not. From the third, he draws the legitimate conclusion that he must equate correctly and his equation will be correct. Truly these are utterances worthy of the oracle at Delphi.

Armed with these suggestions, the pupil is next furnished with a large number of problems, notated, equated, and solved. These serve as practice or illustration; and then he is expected, from the diligent consideration of these, to absorb enough of the genius of equations to enable him to solve all other problems offered, or more pointedly, to understand that which is not expressed and that which the author candidly declares cannot be expressed. In short, from the problems solved, (which, by the way, do not claim to be illustrations of any known principle,) the pupil by his own skill and ingenuity, is to distil, crystallize and apply to all problems, the latent principle which all the skill, ingenuity, and experience of his authority is not able to enunciate; to catch the principle of problems by exposure to solved problems, much as he would catch a disease from infected clothing. The illustrations illustrate nothing except, perhaps, the author's ability to solve the problems and his inability to impart the principle of solution. That these assertions are true, every teacher of the subject knows and nearly every textbook vividly illustrates.

Result of Aids.

And what is the result of such suggestions and illustrations? It would take no prophet to foretell the result of such planting and culture. In point of fact, what kind of finished product do these manufactories turn out? Ask any pupil of our best schools, who has had the advantage of our most approved and popular text-books, if he can solve *any* problem in equations; and his answer will be something like this: "I think so," or, far more probably; "Let me see the problem." He feels no certain confidence in his ability, but from varied experience, more or less extended, he hopes to fit some one of the forms, with which he is familiar, to the problem. He has in his memory a vast but heterogeneous variety from which to draw. He resembles a locksmith, loaded with an immense bunch of keys, trying to pick a lock. After fumbling all and trying most of the keys, not one of which was intended for this lock, he may find one which will enter and shoot the bolt. Even in that case the successful key will probably have many wards and slots of no earthly value in that lock, but if it happens to fit, the locksmith smiles with unalloyed satisfaction. *That* key will fit *that* lock; but how about the next lock? He does not even dare to hope that the same key will fit, but, with a patience begotten of experience, he begins all over again, to fumble and refumble his assortment of rusty keys, long since divorced from their first locks.

Is the algebraist satisfied with the locksmith's method? Is there any key which will fit every lock? We say emphatically, Yes; and as the result of these considerations, we think it fair to assume the need of an aid which will aid.

Analysis of a Problem.

Let us now consider the structure of a problem.

Every problem in algebra, involving equations, contains, explicitly or implicity, two parts; a declaration and an interrogation. Take for example, this simple problem: —

What is that number, the sum of whose third, fourth, and sixth parts is 18?

Here the declaration is, that the sum of the third, fourth and sixth parts is 18.

The interrogation is, What is that number?

Again, the declaration is compound, containing a hypothesis and a conclusion.

The hypothesis is, If the third, fourth, and sixth parts of a certain number be added.

The conclusion is, The sum will be 18.

But, properly, there is a third part, not expressed but hidden and, although hidden, exerting a controlling power throughout every problem; it is that quantity which, if we knew its value, would serve as the key to every other value in the problem. But we do not know its value: it is unknown, and because it is the unknown quantity, it is x. In the above problem it is the required number.

Expression.

Let us now look at the form of expression of a problem, also of an equation.

A problem is always expressed in words and known quantities.

An equation is always expressed in known and unknown quantities.

Our task then is, from a problem expressed in words and known quantities, to evolve an equation expressed in known and unknown quantities. Clearly, this can be effected only by reduction or substitution; in some manner the words must disappear and an unknown quantity must appear. This transition is effected as follows: —

First, we notice that while the conclusion sometimes contains words, it *can* always be expressed in known quantities.

Secondly, if we let x represent the desired result — and this we must do, — the hypothesis can always be expressed in terms of x and known quantities.

And now, if our analysis of the problem has been clear, our work is practically done: for,

The hypothesis, expressed in algebraic terms, is always the left-hand member of the equation.

The conclusion, expressed in known quantities, is always the right-hand member of the equation.

In the above problem the hypothesis expressed in algebraic terms is $\frac{x}{3} + \frac{x}{4} + \frac{x}{6}$.

The conclusion expressed in known quantities is 18.

The equation is $\frac{x}{3} + \frac{x}{4} + \frac{x}{6} = 18$.

The reason is: —

$\frac{x}{3} + \frac{x}{4} + \frac{x}{6}$ is the sum of the third, fourth and sixth parts;

18 is the sum of the third, fourth, and sixth parts.

Things which are equal to the same thing are equal to each other.

Questions Formulated.

The equation may *always* be reached by a series of questions, based upon the preceding principles — questions equally applicable to *every* problem and each capable of but *one* answer and that the *correct* answer.

The questions and answers as applied to the given problem are:

Q. What shall x represent?

A. The number.

(*Always the desired result and answer to the interrogation.*)

Q. What is the *number given in the problem?*

A. 18.

(*Always the conclusion of the declaration expressed in numbers.*)

Q. What does the *problem* say the 18 is?

A. The sum of the third, fourth, and sixth parts of that number.

(*Always the hypothesis expressed in words.*)

Q. What do *you* say the sum of the third, fourth, and sixth parts is?

A. $\frac{x}{3} + \frac{x}{4} + \frac{x}{6}$.

(*Always the hypothesis expressed in algebraic terms.*)

Q. What is the *equation?*

A. $\frac{x}{3} + \frac{x}{4} + \frac{x}{6} = 18$.

Or, concisely; the hypothesis expressed in algebraic terms is always equal to the conclusion expressed in known quantities.

Let us apply these questions to another problem, for which purpose we select: —

A person has $4\frac{1}{4}$ hours at his disposal. How far can he ride in a coach which travels 5 miles an hour, so as to return in time, walking back at the rate of $3\frac{1}{2}$ miles an hour? (Wells' Higher Alg., p. 126, Prob. 54.)

Q. What shall x represent?

A. The number of miles travelled in the coach.

Q. What is the number given in the problem?

A. $4\frac{1}{4}$.

Q. What does the problem say the $4\frac{1}{4}$ is?

A. The number of hours he can spend in the coach and on foot.

Q. What do you say the number of hours he can spend in the coach and on foot, is?

A. $\frac{x}{5}+\frac{x}{3\frac{1}{2}}$.

Q. What is the equation?

A. $\frac{x}{5}+\frac{x}{3\frac{1}{2}}=4\frac{1}{4}$.

For the purpose of illustration it can hardly be necessary to repeat, serially, the questions to each of the following problems. We indicate only the results of the questions.

Gold is $19\frac{1}{4}$ times as heavy as water, and silver is $10\frac{1}{2}$ times. A mixed mass weighs 4160 ounces and displaces 250 ounces of water. How many ounces of each metal does it contain? (Wells' Higher Alg., p. 126, Prob. 51.)

Let $x =$ no. of ounces of gold.

Then $4160 - x =$ no. of ounces of silver.

The number given in the problem is 250 liq. ounces, which is the number of ounces displaced by the gold and silver, and this algebraically expressed is

$$\frac{x}{19\frac{1}{4}}+\frac{4160-x}{10\frac{1}{2}}$$

Put in the form of a diagram,

No. of ounces displaced by the gold and silver.

As expressed by pupil.		As expressed by problem.
$\frac{x}{19\frac{1}{4}}+\frac{4160-x}{10\frac{1}{2}}$	$=$	250

Two persons A and B, 63 miles apart start at the same time and travel toward each other. A travels 4 miles an hour and B 3 miles an hour. How far will each have travelled when they meet? (Wells' Higher Alg. p. 126, Prob. 53.)

Let $x =$ no. of miles A will have travelled.

Then, $63 - x =$ no. of miles B will have travelled.

The number (implicitly) given in the problem is 0, which is the difference in A's and B's time, and this algebraically expressed is:

$$\frac{x}{4} - \frac{63 - x}{3\frac{1}{2}}$$

Difference, in hours, between A's and B's time,

As expressed by pupil.		As expressed by problem.
$\frac{x}{4} - \frac{63 - x}{3\frac{1}{2}}$	$=$	0

What principal at r per cent will amount to a dollars in t years? (Wells' Higher Alg. p. 127, Prob. 58.)

Let $x =$ no. of dollars in principal.

The number given in the problem is a, which is the amount, and this algebraically expressed is:

$$x + \frac{rtx}{100}$$

Amount

As expressed by pupil.		As expressed by problem.
$x + \frac{rtx}{100}$	$=$	a

A general, arranging his men in a solid square, finds he has 21 men over. But attempting to add 1 man to each side of the square, he finds he wants 200 men to fill up the square. Required the number of men on a side at first, and the whole number of troops. (Wells' Higher Alg., p. 127, Prob. 63.)

Let $x =$ no. of men on a side at first.

The number (implicitly) given in the problem is 221, which is the difference, in men, between the two squares, and this algebraically expressed is:

$$x^2 + 2x + 1 - x^2$$

Difference, in men, between two squares.

As expressed by pupil.		As expressed by problem.
$x^2 + 2x + 1 - x^2$	$=$	221

At what time between 3 and 4 o'clock are the hands of a watch opposite each other? (Wells' Higher Alg., p. 128, Prob. 70.)

Let $x =$ no. of minutes past 3 o'clock.

The number (implicitly) given in the problem is 45, which is the distance to be gained by the minute hand, and this algebraically expressed, is:

$$x - \frac{x}{12} \text{ or better } \frac{11x}{12}$$

Distance to be gained by minute hand.

As expressed by pupil.		As expressed by problem.
$\frac{11x}{12}$	$=$	45

A greyhound makes 3 leaps while a hare makes 4; but 2 of the greyhound's leaps are equivalent to 3 of the hare's. The hare has a start of 50 of the greyhound's leaps. How many leaps does each take before the hare is caught? (Wentworth's Complete Algebra, p. 147, Prob. 51.)

Let $x =$ no. of leaps the greyhound must take to catch the hare.

Then $\frac{4x}{3} =$ no. of leaps the hare must take to be caught.

Then 1 hare's leap $= \frac{2}{3}$ of greyhound's leap.

The number given in the problem is 50, which is the difference in the distance travelled by the greyhound and hare, expressed in greyhound's leaps; and this algebraically expressed is:

$$x - \frac{8x}{9}.$$

Difference, in greyhound's leaps, travelled by greyhound and hare.

As expressed by pupil.		As expressed by problem.
$x - \frac{8x}{9}$	$=$	50

If 19 pounds of gold lose 1 pound, and 10 pounds of silver lose 1 pound, when weighed in water, find the amount of each in a mass of gold and silver weighing 106 pounds in air and 99 pounds in water. (Wentworth's Complete Algebra, p. 148, Prob. 58.)

Let $x =$ no. of pounds of gold.

Then $106 - x =$ no. of pounds of silver.

The number (implicitly) given in the problem is 7, which is number of pounds lost by weighing in water, and this algebraically expressed, is:

$$\frac{x}{19} + \frac{106 - x}{10}$$

Loss of weight in water.

As expressed by pupil.		As expressed by problem.
$\frac{x}{19} + \frac{106 - x}{10}$	$=$	7

A cask contains 12 gallons of wine and 18 gallons of water; another cask contains 9 gallons of wine and 3 gallons of water. How many gallons must be drawn from each cask to produce a mixture containing 7 gallons of wine and 7 gallons of water? (Wentworth's Complete Algebra, p. 150, Prob. 70.)

Let $x =$ number of gallons of mixture drawn from first cask.

Then $14 - x =$ number of gallons of mixture drawn from second cask.

The number given in the problem is 7, which is the number of gallons of wine contained in the mixture drawn from the two casks and this algebraically expressed, is:

$$\frac{2x}{5} + \frac{3(14 - x)}{4}$$

Number of gallons of wine withdrawn from both casks.

As expressed by pupil.		As expressed by problem.
$\frac{2x}{5} + \frac{3(14 - x)}{4}$	$=$	7

Universality of Application.

The foregoing were selected because considered representative problems; viz., specific gravity, courier, clock, interest, etc. They do not prove absolutely that the principle will hold in *every* case, neither would a hundred, nor a thousand illustrations. But, as in geometry we say let $A\ B\ C$ be *any* triangle and, having proved our assertion with reference to $A\ B\ C$, argue that the same conclusion may be reached by the same method of reasoning with regard to *any* triangle and hence with regard to *every* triangle; so, we say, as this method holds with regard to these problems, the same method will solve *any* problem and *every* problem.

But more than this, we claim, aside from the test as applied to any particular problem or problems, that, from the very nature of a problem and the nature of the method, it *must* solve all problems.

As long as every problem contains a hypothesis and a conclusion, and the hypothesis is capable of being expressed algebraically, so long will this principle apply. And further, we assert that when a problem does not contain a hypothesis and a conclusion, it is not a mathematical proposition; and when the hypothesis is not capable of being algebraically expressed, the proposition is not algebraic.

Objections Answered.

One of the elements of a problem is the interrogation or question; evidently the answer is unkown, else why ask it? If unknown then the answer to the question is x, the unknown quantity of algebra. Let x represent the answer to the question. "But," says the objector, "there are many unknown quantities and x may represent any of them, at the will of him who solves the problem." True, there may be many unknown quantities but *the* unknown quantity is *the* answer to *the* question; and it is *the* unknown, not *any* or *some* unknown quantity which is desired.

Again the objector claims there are problems in which that which is plainly the unknown quantity does not answer the question; to which the answer is, that any problem may be bungled in its enunciation and there is nothing to prevent the author from predicating a problem upon any basis and then asking an irrelevant or indirect question. And, still more, we know that it is often done purposely to mislead. We are aware that our assertion is contrary to the aids offered in many algebras which tell the pupil that x may be the quantity desired, but that such is not always the case. We are perfectly willing to rest the question upon its merits.

Again says the objector, the proposed method asserts that the right-hand member will *always* be a known quantity; now while this is often the case, there are many problems whose conditions require that the right-hand member should be a composite quantity, composed of known and unknown quantites; e. g.,

Divide 34 into two parts so that four-sevenths of one may be equal to two-fifths of the other.

Is not the equation $\frac{4x}{7} = \frac{2(34 - x)}{5}$? And does not this destroy your theory? Not at all; it is *an* equation but not *the* equation; if it were, it certainly would destroy our theory. But whenever the express assertion is made that two quantities are equal, it carries with it the implicit assertion that their difference is 0: the known quantity is 0, and the equation takes the form $\frac{4x}{7} - \frac{2(34-x)}{5} = 0$, as do all problems containing an assertion of equality between two quantities. Surely we would not hesitate to say that *A* was less than *B*, if the problem asserted that *B* was greater than *A*.

Sometimes there is a duplex assertion as (Wells' H. Alg., p. 126, Prob. 51.) 250 liq. ounces may be the assertion; but just as truly 4160 troy ounces may be the assertion and the equation just as well have been based upon the latter as upon the former. So (Wentworth, p. 150, Prob. 70) the assertion may be said to be 7 gals. of wine or 7 gals. of water; the author has given us two assertions and therefore two bases for an equation.

Just as truly from the form of the question, sometimes x is duplex, when the question takes the form: Required *A*'s and *B*'s fortune. If in one unknown quantity, x can represent either, but not both, andt he choice once made must stand.

Again, there are many forms of implicit assertion, but they are nevertheless unequivocal asssertions; as for example, when the problem expressly says hhd., it implicitly says 63 gals.: explicitly, a day; implicitly, 24 hrs.: explicitly, weight in air 106 oz, weight in water, 99 oz.; implicitly, loss of weight in water, 7 oz. It may ask when will the hands of a clock be together after 6 o'clock? It then implicitly asks how long will it take the minute hand to gain 30 minute spaces on the dial?

The fact that a problem may be clouded in its enunciation does not establish the fact that a method of solution is cloudy. A fog may conceal an object but that does not prevent its existence. In conclusion we would say that a third and still stronger proof, to the writer, of the soundness and universality of the foregoing method is the fact, that in a somewhat extended experience he has yet to meet a problem which will not yield to the method proposed.

HISTORY WORK IN HIGH SCHOOLS.

ROSE BARTON WINTERBURN, SAN DIEGO HIGH SCHOOL, CALIFORNIA.

"WERE I to pray for a taste which should stand me in stead under every variety of circumstances, and be a source of happiness and cheerfulness to me during life, and a shield against its ills, however things might go amiss or the world frown upon me, it would be a taste for reading. * * * * Give a man this taste, and the means of gratifying it, and you can hardly fail of making him a happy man: unless indeed, you put into his hands a most perverse selection of books. You place him in contact with the best society in every period of history, — with the wisest, the wittiest, the tenderest, the bravest, the purest characters who have adorned humanity. You make him a denizen of all nations, a contemporary of all ages. The world has been created for him."

So says Sir John Herschel; and History is the study that opens to man's hungry brain more books, and more instructive and interesting books, than any other branch of intellectual work. But how lamentable is the condition of that study to-day! How many of our cultured people, how many practical business men, how many of our educators even, turn to history as a relaxation? Why is it that history with its myriads of delightful books is so misunderstood, unappreciated, neglected? We need not look far for the reason; almost any child explains it when he sighs out, "I don't like history, I can't remember dates." We have been making history a succession of dates and battles, while its great principles have been left unnoticed or unknown, principles that are the foundation of human life, of the existence of nations, of the development of the world. History, that should teach us the growth and the beauty of art, science, and literature; the tenderness and sufferings of religion; the early degradation of the common people of all nations, and their undying struggle to make themselves the rulers of the world, — history, with such inspiring lessons as these, has been made the drudge to stow away and carry loads of dates, — and very little else.

The first years of history work are of the utmost importance to the future of the child; for in them he should learn to love the study, even if much apparently necessary memorizing be sacrificed; and he should begin to see, even though unconsciously, the great principles of ceaseless advancement that govern the world. There are dangers in these first years: a child is so likely to form the opinion that studying history means committing dates and unintelligible facts; and a second danger springs from the first, — that there may grow up a life-long antipathy to history. Dates are necessary, but the child should learn them as he learns that he has bones in his body: because he leans upon and uses them. It needs no text-book on physiology to teach a child of six that he has bones in his hand or his foot. It should never need a text-book on history to teach a child of twelve that European feet first pressed Plymouth rock in 1620, or that the Independence bell rang out its mad peal of liberty in 1776. It is hardly necessary to say anything whatever to the children about dates; it is enough, as the grand independence period opens, always to speak of the Convention of 1776, and the Liberty Bell of 1776. The children repeat the words, "The Bell of '76, the Declaration of '76," and learn the date from the bell itself, from the Declaration, from the scorching July sun of that memorable day.

When the allotted time has been put upon the study, if there is a fear that dates have been somewhat neglected, it is very easy to strengthen the child's knowledge of those that are important. Brief topical reviews offer every advantage. Make out for review the broad divisions into periods. Fix absolutely a date for the beginning and close of every one; group related events into their proper dependence upon each other; know that the child understands the arrangement, and the work is done.

In this way it is not difficult to keep clear of the rocks on which history is being wrecked. The child never suspects their existence if he only has a good pilot. With care in selecting supplemental reading, historical work may be introduced early in the child's life, and he will learn almost of himself to enjoy the stories of olden times. Read current history, books of travel, and light historical works, in connection with geography. Why should Norway, for instance, be studied without having at hand, either in books or in the teacher's memory, some of the many good stories of those warlike old Norsemen who steered their slender, snake-like boats into every river and inlet of Western Europe; who knew Iceland, and left their language there; who visited Greenland and skimmed along the northern shores of America? Norway, Sweden, Denmark and England may be drawn together by these stories, and the ninth, tenth, and eleventh centuries stamped ineffaceably on the boy's mind. He longs to trace those Northmen into the sunny southern homes they won for themselves in France and Italy, and even the child sees a great difference between Robert Guiscard and his fur-clad northern ancestor. And then, — most important point of all, — will he not seek books where he can read more about them, and look forward eagerly to the time when he can study about these delightful relatives of ours?

As the geography of the New England states is taken up, some of the supplemental reading should be on the Colonial and Revolutionary days; or some of the stirring biographies of such men as Samuel Adams, James Otis, John Hancock. Read different versions of the Boston Tea party, the boys before General Gage, the fierce Indian wars, the barricaded "Meeting Houses." The eighth grade might even read of the Hartford Convention of 1814, and get here a taste of nullification. Boston Harbor and Salem will be fixed geographically and historically, if we connect them by a little well-chosen reading on the Boston Port Bill and the bitter feelings it caused on both sides of the ocean. Bunker Hill will necessitate a good map of the harbor. Harvard College will be placed geographically by studying the educational tendencies of the colony. New York opens up a store of legends and history for children and youth, beautifully narrated by Irving and Cooper. Virginia, Maryland and the Carolinas furnish thrilling biographies and stories of adventure, religion, commerce, and slavery. Much of this reading may be introduced as detached stories, whose connection is simply with the geography of the place. It is no matter if United States history is not systematically studied till another year, and if general history is removed even three years farther. Those subjects will be so much the richer and the more intelligently studied when their time does arrive.

If the same course is pursued in the geography of foreign countries, a good foundation for future study will be laid during the three years' course in geography, even if the high school is never entered, or if general history is never carefully studied. Surely a boy of ordinary intelligence will find, as the years pass, more than narrative work in his reading. He will realize that he is studying human life; growing mental powers will lead him to appreciate deeper, more thoughtful books, and the political and the social lessons there found will not be wasted. In this supplemental geography reading, as the knowledge of the world and its life grows somewhat better, the child's mind can be directed to see the chain of cause and effect that stretches in an unbroken length from the days of nomads to the present civilization. For the philosophy of history forces itself upon every observant mind; we do not need to search for it, we need simply to watch it, and the meaning of life — or history — is surely grasped.

I know the difficulties with which we must contend. The chief one is lack of books and the inability or disinclination of pupils and of school boards to buy them. But in these days of cheap books, whose publishers may be learned at any bookstore, surely that obstacle is not appalling. Moreover, if the child's interest is once roused he may help himself out of the second part of the dilemma, and self help is divine help. Many a child will earn for himself the necessary ten, fifteen, or fifty cents to buy the story that he likes best, be it historical, scientific, or romantic. A fifteen-cent book is a trifle, but the boy who is roused to earn it by the demands of an awakening mind, is receiving a self-governing, and at the same time self-gratifying, discipline that will aid him to give a proper direction to his restless activity. He will be better equipped to enter the life where the people are sovereign.

The most important feature of history teaching, is period, or topical work; a method that, not being properly understood, is not earnestly followed; while really, as is said by Hallam, Guizot, Ranke and Schlegel, it is the only way to teach or to study history. No period has definite boundaries; every one forms itself, and is distinguished from every other, because during it some principle of human life, some form of man's civilization became especially prominent. But every period contains not only this important feature, but the dying roots of some previous form of development, and the young branches of some new life. These must be identified and carefully traced. Thus, periods are never distinct; each lapses into, or, more properly, helps to form its successor.

In United States history the child scarcely knows when he passes from the colonial into the revolutionary period; he would never think of the real importance of the transition, were his attention not directed to it. Then he keenly enjoys tracing the different spirit of the two periods, contrasting and comparing social, political and commercial relations under the widely different circumstances. He will see the prevailing feature of the first period, making homes in a new country; he will see dying out the old world prejudices of religious intolerance, class feeling, ignorance of the masses; and he will watch the new growth, alienation from the mother country, begun and fostered by the Navigation Acts and other oppressive measures of the British Parliament from 1651 to 1776. Under the varying fortunes of the war for independence that follows is another movement of the people claiming deep attention, their efforts for union. As from 1776 to 1789 these attempts gradually centre into the Constitution, the careful student must have at least two broad principles in mind. First, the defects of the confederation must be studied to know why the league was found insufficient for the jealous but extremely patriotic states. Understanding these defects, and realizing the exciting dangers of the time, are requisite preparations for studying and comprehending the provisions and compromises of the Constitution. Secondly, in these thirteen years there is found ominously protruding on every subject the pernicious doctrine of States' Rights, the theory that is to grow and strengthen, until in the next period, it almost breaks apart the Union. When the period is completed no review work is needed to fix the three steps, alienation, separation, union, and three topics that have been studied individually are placed in their logical relation and sequence. The history of slavery cannot be a unit in the mind of any person who tries to comprehend its advance by studying drearily through the successive presidential administrations; by learning here about the Missouri Compromise of 1820, there about the Omnibus Bill of 1850, or the Dred Scott decision in 1857. They have no connection with each other, and a good memory is required to keep them with the right president. The Emancipation Proclamation seems only an episode in the civil war, and no one cares to read it. But it all appears very different to the pupil who is guided through the history of slavery as one comprehensive topic. The dates 1620 and 1863 mean something, then; they mark the beginning and the end of the most sorrowful story folded away between the leaves of our history. There come before the mind the unhappy negroes of 1620, landed from the ocean vessel, exhausted after their long voyage, bruised by the irons and whips of their captors, frightened at new scenes and faces, cowering together with anxious, questioning glances until sold into scattered homes. The wide, tobacco-sown streets of Jamestown are slave-tended; the Revolution presents armed slaves fighting to win for their masters the liberty which to themselves is mockery. The student sees with breathless interest how the curse upon the land deepens and broadens; and if you can put the right book into his hand, he watches with tearful eyes the growing misery and torture of the slave. His blood boils as he talks over the bitter, desperate struggle to spread slavery over all this fair land. He knows, you scarcely know where he learned it, the determined effort of the slaveholders to add territory after territory to the already broad domains of slavery. His mind leaps from the Missouri Compromise of 1820, to Clay's Measure of 1850, and to the border warfare in Kansas and Nebraska; then to Chief Justice Taney's decision in the Dred Scott case in 1857. They are the stepping-stones on which he treads firmly in following this furious strife for more slave territory. Then we watch for the result of the Civil War, and even read that brief Emancipation Proclamation of 1863.

The Reconstruction era means something to a mind thus prepared for its puzzling questions. The South had been wasted; fields were lying untilled; laborers had emigrated, or were struggling to stand on the foundations just placed beneath their feet by the central government. A rebellion had been put down, but by war-stained hands, and feet that had trodden in brothers' blood. Bitter feelings were rankling all the more fiercely because of defeat. Great statesmen had been putting their strongest brain power into devising means to subvert the national government; and eminent generals had many times seemed near to success in carrying out those plans. The problem before the central power at Washington was to bring back this devastated, depopulated, still hostile country into a harmonious union. Mistakes in procedure were inevitable; mistakes and excesses there were. High school pupils, and even the less mature minds of the lower grades will recognize that thirty years is far too brief a time in which to eradicate wholly differences of life in religion, education, and customs of the house and the field, inbred for nearly two centuries and a half. They will know that we still have much to do.

These are some of the principles of the life of the United States. These are some of the impulses which guided or forced our people into the steps they have taken. The others lie ready for those who will study them out. There are our relations with foreign countries, with England, France, Russia, and China, leading directly into our own foreign wars and commercial intercourse. There is the Accession of Public Domain, the history of Nullification or State Rights, the Rise and Development of Political Parties, and others readily found by him who is desirous of teaching true history to young people. Every teacher can and must adapt his work to the demands of his class. Grade, allotted time, available books, must be considered. But this much is certain: — the teacher himself must have the requisite knowledge. It does not do to know thoroughly simply the text-book used. The instructor can never afford to teach up to the last grain of knowledge he possesses. There must be a reserve force, or shallowness proclaims itself, and the book is taught, not the subject. It is of far more importance that the teacher of the first year in history should know the broad principles of our country's existence and development, than that he should know every date and event between the covers of the book. There is but one way to obtain the knowledge, and that is over no royal road. We must trace out and develop the work for ourselves. Institute work cannot impart it, normal training only begins it: both are sign-boards telling us which way to go. Both may be helpful, neither can perfect. The progressive spirit will find the right road. From normal or university instruction, or from scientific historical writings, the teacher of to-day must learn the general divisions of our history. With these in mind he can read intelligently upon the separate topics in any book or paper that comes to hand, and then adapt the knowledge to his pupils' minds. They in turn read and study, not isolated events, but occurrences always connected as cause and result; and they, too, trace out, even though feebly, some principle that has a visible beginning and a visible end. Thus, there will be imparted in the public schools that kind of historical knowledge which is the basis of all others, a thorough acquaintance with the first periods of history. Higher education may go farther.

The leading idea for general history is the same; only topics are multiplied, and their results are farther reaching and more intricate. Here the student should pass from Egypt to the Asiatic nations, thence to Greece, Rome, Modern Europe, and should complete the course with America, finding at the conclusion that he has traced human life from its beginning to its present condition. There is no more important principle to be studied in the curriculum of any high school or university than that of social development; and we quote Schlegel in adding, "There is none more exalted; for the exercise of man's free will transcends nature and nature's laws." What is the whole world and its history but life and the exercise of man's free will? Its architecture and its national constitutions, its wars and its peaceful commerce, its art and its law, all unite in history, and their interdependence must be understood by the careful student. We cannot study Egypt as an isolated nation. We fail utterly to grasp her share in the slow unfolding of human genius unless we find in her stiff, conventional art man's earliest attempts to express his higher nature. Then how eagerly the mind springs to its work when it begins to trace development. How gladly Persian palaces are studied from book or picture to find marks of improvement over the massive overhanging masonry of Thebes or Memphis; how thorough is the appreciation of the slender, beautiful columns at Persepolis and Khorsabad, when compared with the stiff, heavy, lotus-flower capital of the Egyptian pillars. How the mind revels in the freedom of thought in Greece, where it became possible for every man to work out his own conception of beauty and art, instead of being bound by law to represent the human figure thus and so.

But it is always *man*, the principles of life and human development that are being studied. We cannot hasten over the Middle Ages, intricate as seems their history, for the modern world is there in embryo. We would linger long in the Italian city republics; for jarring, clashing, clannish, as was their life, there blossomed the first flowers of the Renaissance. Political life, poetry, painting, sculpture, flourished with a recreative, sometimes with a self-stifling luxuriance, as if the splendid Italian sun were emulating in humanity its own efforts in vegetation. Here in these forcing houses of republican ideas, Raphael and Michael Angelo breathed the fiery, perfumed life of Florence; Titian bathed his soul in the mellow, liquid music of Venetian air, and treasured up in his mind to reproduce upon his canvasses the stately repose he loved so dearly in the Bride of the Sea.

Can we stop? Can the thoughtful student resist the impulse to take up the less fascinating history of England, that prime institution-making country of the world? Then, too, present themselves the problems of monarchical and of republican France; of unorganized but conservative Germany, and of writhing Russia.

But all are wondering where in our crowded school hours there is time for all this work. There is time; and children need not be made book-worms, neither need history be the only study in the school course. Look earnestly at the lives of our boys and girls and at the temptations that surround them. How many a bright-eyed, quick-witted boy loses himself and his opportunities forever on the streets or in the low haunts of our cities and villages! What numbers of girls sacrifice youth's first freshness and their purity of heart in hours of reckless flirtations and amusements! Is there not time for earnest reading, thinking, and doing? No one branch of study can correct all the evils of life, neither can children be saved by education from degradation. The schools alone cannot be moulders of our young people. There must be coöperation and the strong, steady support of the home in education as well as in discipline, and even then, many will go to ruin.

I am not intentionally making history an excuse to write upon the general training of our boys and girls. But when any phase of their education is touched upon, its relation to the development of the child into pure, noble maturity is the most important light in which it can be placed. History should be not merely a school-room study, but a powerful auxiliary in forming the life of the boy or girl. It would be a most important auxiliary in teaching responsibility of thought and deed, if its lessons were gently but unyieldingly instilled into the minds of our young people, especially if they were taught at home as well as in the schools; taught not for the wearying succession of dates and names, not for the dry enumeration of battles won or lost, but for the deep, grand principles that breathe in every page of the world's recorded life.

COMMUNICATION.

Dear Mr. Bacon:—I thank you very much for your kindness in offering to correct that printer's error in my letter in the October number of your journal.

Wishing to change the emphasis in a sentence, I wrote, "to enable the student *clearly and easily to express* his ideas," instead of "to enable the student to express his ideas *clearly and easily*," as it stood in the proof. My correction the printer kindly changed to "to enable the student *to clearly and easily express*," etc., thus making the only blunder he possibly could have made.

Upon this solecism, so common in the newspaper of the day, we make constant war here at Harvard. It seems the irony of Fate that after writing "Solecism XII." (the reference to Hill's Rhetoric), for hours against such errors in freshmen themes, I should be made to commit the sin against which we preach.

The mistake seems a small one, but as the fault is one to the correction of which we give such constant effort, I wish you would correct it in the next number of THE ACADEMY. At the same time I wish you would give a little lecture to teachers on this very point and thus help us out here at Cambridge, — give us less red ink work.

Sincerely yours,

BYRON SATTERLEE HURLBUT.

Cambridge, Oct. 21, 1891.

NOTES.

BY the death of Prof. John Larkin Lincoln, Brown University loses the senior member of her faculty. During the past few years Professor Lincoln has gradually lightened his work at the university and taken somewhat of the needed rest denied him in former years. Twenty-five years ago, when we were a student, he was by all odds the best teacher, pure and simple, connected with the institution. There was a directness about his methods and a vigor and earnestness in all that he did which was highly effective. Moreover, we remember him especially as one who was not above the plain, every-day work of the class-room with students who were not ripe for the more advanced methods. It would have been far easier for him to have lectured. It would have saved his sensitive soul much pain to have been spared some of the blood-curdling mistranslations by which his ears were affronted, and the knowledge of our ignorance which tortured him, could have been avoided if he had not questioned us so closely, and had been content simply to set before us the rich stores with which he might easily have furnished us. It seems to us sometimes that in higher institutions of learning the teacher is going out of fashion. A very bright young professor remarked to us not long ago, "It won't do for me to let my president know that I can teach: if I do I shall get nothing to do but teach freshmen. So when a division is given me I make the work so bad that it will not be tried again, and in that way I get advanced work to do." In our memory Professor Lincoln stands out as the exact opposite of this modern theorist in education. He was a *teacher*, almost an ideal teacher.

The gracious personality which during his earlier years was somewhat covered up by the strenuous work of daily routine became in the latter years of his life more and more his characteristic. More and more both undergraduates and alumni turned to him with repeated evidences of admiration and affection. A visible token of this feeling is the readiness with which at the completion of his fiftieth year of service in the university the alumni raised the sum of $100,000, to be known as the Lincoln Fund, and to be devoted to the general purpose of increasing the resources of the university. Lincoln Field, the athletic ground of the university named in recognition of his active interest in undergraduate sports, bears further witness to the same feeling. His appearance on the campus always called forth a cordial and respectful greeting, and at the annual commencement dinner no one else received such hearty salutations. For an old graduate to meet him was to receive a smile and a greeting like fresh air and sunshine.

Professor Lincoln was born in Boston, February 23, 1817, fitted for college at the Latin school, and graduated at Brown University in 1836. After teaching for one year in the Columbian College at Washington, and studying two years in Newton Theological Seminary, he became tutor in Greek at his alma mater. Two years later he went to Europe and spent three years in study and travel. Returning in 1844, he became assistant professor of the Latin language and literature at Brown University, and the following year was raised to the full professorship, a position which he held with honor up to the time of his death, Oct. 17, 1891. He prepared editions of Livy, Horace, and Ovid, and was a valued contributor to reviews and magazines.

PRESSURE of other matter last month prevented any comment in THE ACADEMY upon the loss which New York secondary teachers sustain in the death of Principal Asher B. Evans of Lockport Union School. Mr. Evans was easily the strongest man connected with secondary education in the state. His mental grasp was extraordinary, and his teaching power unusual. His specialty as a student was mathematics, and within that specialty he developed the minor one of solving problems, to a degree which left him without a rival either in this country or in Europe. Some months ago there was sent to THE ACADEMY a problem which the sender claimed had never been solved. We were unable to tell whether it was a hoax or not, for the conditions were so involved and abstruse as to be entirely beyond our comprehension. So we sent it to Mr. Evans, with the request that he look at it and report. The first returning mail brought the solution.

So far as we know, however, Mr. Evans never taught mathematics in the Lockport school. Latin and Greek he did teach, and teach splendidly, along the lines followed by Dr. Taylor of Andover, and other eminent teachers of thirty years ago. In botany and geology he was well versed, as, indeed, he was in all scientific work. As a disciplinarian and executive he was of the stern, rather than of the gentle type, but few men have been more successful, more conscientious, or wielded among their pupils a more potent influence for good. Endowed naturally with a strong will and a temper which, if uncontrolled, would have been violent, he brought both so completely under the sway of his moral judgment that what might easily have been a serious handicap, became in reality an element of power. Of necessity, such a man gains warm friends and bitter enemies. That Mr. Evans had such friends and such enemies in Lockport, goes without saying, but his loss to the community in which he lived for twenty-four years is inexpressible and is frankly admitted by all.

Mr Evans was by nature conservative, too much so, perhaps. That he did not identify himself more closely with the other teachers of the state in their efforts at organization, was a source of loss to him as well as to them. His scholarship, his experience, his strict conscientiousness and high sense of duty, even the very conservative quality which at times hindered him, would have made him a power among the teachers of the state, and on the other hand, the influence of association with other teachers would have given him fresh impulses and quickened in his thought currents which needed no added depth or strength. Personally, we know that he was thoroughly interested in all that was done to advance the standards and raise the ideals of education. He had no sympathy with shams or with self-seeking, and if he was slow to give outward expression to his interest, that interest was none the less real and vital. Through many years of somewhat intimate acquaintance, we found him always unobtrusive, but cordial, ready with active assistance whenever called upon, and at all times with sympathy.

Mr. Evans was born at Hector, N. Y., Sept. 21, 1834, and graduated at Madison (now Colgate) University, in 1860. Before entering college he had become distinguished for his mathematical studies, and was in correspondence with leading mathematicians in this country and in Europe. On leaving college, he taught at Nunda, Penfield, and Wilson, until 1867, when he was appointed principal of Lockport Union school. Here he taught till the time of his death, Sept. 24, 1891. In 1869, he married Miss Sarah Elizabeth Haines, who, with two children, a son and a daughter, survives him.

WE have received the following announcement which we take pleasure in bringing to the notice of our readers:

On the first of January, 1892, it is expected that the initial number of a new magazine, "SCHOOL AND COLLEGE," will appear. The editorial management of the periodical has been committed to my care.

As the name implies, the magazine will be devoted to the promotion of secondary and higher education. While aiming especially to serve the interests that are common to both schools and colleges, it will strive to leave no department of instruction in either group of institutions without the benefit of such helpful influences as it can command. It will invite contributions from presidents, professors, and teachers who are eminent by reason of successful administration or of acquirements in special lines of instruction; it will also welcome the productions and letters of younger workers who have their spurs yet to earn. It will furnish an arena in which advocates of change and reform may contend for their new theories, and on which conservatives may mass their forces in defence. It will have a place for the philosophy of education, yet will aim ever to be direct, practical, and intelligible. It hopes to become a valued medium of intercommunication among instructors in high schools, academies, seminaries, and colleges, and a favored vehicle for the presentation of the best American thought on secondary and collegiate education.

In addition, it will stretch out its hands across the border and beyond the ocean. Its department of foreign correspondence will be an especial care. In the belief that the evolution of the science and the art of education can be helpfully stimulated and guided by an accurate and fresh knowledge of the progress of the same interests abroad, engagements have been made with competent observers at several important educational centres in Europe to furnish regular letters, some of which will appear in each issue. The service of this correspondence will be the more valuable because the writers will be persons intimately acquainted with the problems now pressing for solution in American institutions of learning.

Other departments will distinguish the new periodical. Open letters on all subjects germane to the general purpose of the magazine will be cordially welcomed. Volumes submitted for review will receive adequate attention from specialists. Mention will be made of valuable articles on secondary and higher education as they are observed in exchanges or other contemporary periodicals, and summaries of the most interesting will be given. Current educational news, if of real importance, will be reported.

"SCHOOL AND COLLEGE" will have sixty-four pages of the ordinary large review size, and in style will resemble the "Political Science Quarterly" published from the same office, — that of Messrs. Ginn & Company, Boston. Great care will be taken with the mechanical execution. Cuts and diagrams will be employed as there may be occasion for them — not to embellish but to illustrate. It will appear on the first of each month, except July and August. The price will be $1.50 a year, or 20 cents a number.

I shall be pleased to receive from you any indication of your sympathy and support, whether it assumes the form of a subscription, a contribution to the pages of the periodical, a personal letter, or all of these.

Communications relating to articles, reviews, and exchanges should be addressed to Ray Greene Huling, 195 Cottage St., New Bedford, Mass.

Subscriptions should be forwarded and all business communications addressed to Ginn & Company, 7-13 Tremont Place, Boston.

RAY GREENE HULING.

The publishers have accompanied Mr. Huling's announcement by a somewhat similar one in which they set forth that the "need of a new organ [medium?] of free discussion has become a crying one." During the six years of our editing THE ACADEMY, we have been obliged to return to the authors not less than two-thirds of all the articles submitted. Consequently the wail of the unappreciated has sometimes reached our ears. It has not, however, seemed wise to us to allow our sympathies to be swayed too far by these "crying" needs. From the table of contents of the first number of the new journal, we judge that Mr. Huling is not of the same mind as his publishers. We notice no name among the contributors which would not be welcomed on the pages of journals now existing. We certainly hope Mr. Huling will maintain the high standard he has already set, and not allow the sympathies of his publishers to betray him into the acceptance of any articles but those which his own judgement deems worthy.

The publishers disclaim any expectation of pecuniary gain, but hope to be insured against heavy loss. We think this is right. Certainly those who are crying for "a new organ" [medium?] ought in all reason to support it, and although we are privately assured that the sympathies of the publishers have been so wrought upon by this "crying need" that they are willing to supply it even at considerable pecuniary loss to themselves, still, we sincerely hope that loss will not accrue to them. Indeed, we predict that before many months are over they will be as deaf to the cries of the needy as the most hard-hearted editor who now brandishes a blue pencil or plies the busy shears. And then again, doubtless, will go up another wail of the unappreciated, another "crying need" will be felt, and another "new organ of free discussion" will be started.

We prophesy bitter days still for the unappreciated and an excellent new journal under the conduct of Mr. Huling. May his shadow never be less!

As announced in the November ACADEMY the seventh Holiday Conference of the Associated Academic Principals of the State of New York will be held in Syracuse, December 29th and 30th. The meetings will be held in Greyhound hall, corner of Warren and James streets. Headquarters will be at the Globe hotel, where the same rates have been secured as last year. The usual reduced fare on the various railroads has also been obtained. A circular giving full information will soon be in the hands of the principals. In addition to the subjects already mentioned, the following will be considered: —

What is the work that can be reasonably expected in elementary English?
Methods of teaching English literature.
Methods of stimulating the reading habit.
The New York Academies' exhibit at the World's Fair.
The relation of academies to free libraries.
The best order of academic studies.
Should pupils dismissed from one school be admitted to another?
The inductive method of teaching Latin and Greek.
The Sheldon-Barnes plan of teaching United States history.
The delay in granting Regents' credentials.

This is expected to be one of the most interesting as well as one of the most largely attended meetings yet held.

Every principal in the state who possibly can, should be present ready to participate in the discussions.

This year's meeting of the New England Association of Colleges and Preparatory Schools, to a report of which we gave the entire space of the November Academy, was unusually successful. Our readers can judge somewhat of the definite practical features of the meeting from our report. Of the pleasanter social features, of the gracious hospitality of the President and Fellows of Harvard College, of the exquisitely unobtrusive, but perfectly efficient, work of the committee of arrangements (Mrs. Palmer, Professor Wright, and Miss Eastman), however, the report gives no idea. Of this phase of the meeting it would be impossible to speak in too strong terms.

BOOKS RECEIVED.

De School. Practische Paedagogiek ten dienste van onderwijzers, door J. Koonings, hoofd der school te Woensel en onderwijzer aan de Rijks-Normaallessen te Eindhoven. Zutphen, 1891.

Mijnheer Koonings's book is intended for the many who teach rather than for the few who study scientific pedagogy and who purpose to theorize. It is a compend of advice and directions concerning the immediate tasks of school organization and management. The author seems to be both a teacher of youth and a teacher of teachers. He gives us accordingly a glimpse into the problems of Dutch education, and also a view of the way in which the Dutch normal schools undertake the practical solution of these problems. Such a book must of course be interesting. A visit to a Dutch school would not be more so. The Netherlands are fairly in the tide of modern movement and aspiration in education, and their efforts are not without significance to the observer and collector of data bearing on the progress of the world in this all-important interest.

Many as are the books now publishing in all languages for the use of teachers, there is always room for a book that shall mediate between the laborious worker in the school-room and the scientists whose works are bulky and hard for the average man to read. This function of mediation between pedagogic science and pedagogic practice should be distinctly apprehended and fruitfully discharged by the normal schools. We fear much good educational psychology goes to waste for lack of the solvent that only he who is at once a good theorist and a good practitioner could apply in his psychological instruction. Mijnheer Koonings seems to us just the man for this business. We would instance his chapter, *De Leertrappen*, as a specimen of neat psychologizing that any clear-headed man or woman could take to school and carry into effect. There is no public so clearly discernible and so distinctly expectant as that measureless army of teachers which to-day awaits the pedagogic writer who can speak for it the solvent word and interpret in terms of every-day speech the meaning of the abstruse lecturing and writing that it has hitherto found a tantalizing bewilderment.

We would cite also the chapter, *De Leertoon*, as an instance of most salutary and impressive counsel-giving on a subject of infinite importance. The upshot of much of the school-philosophizing that we hear about us is an apotheosis of tact. The tactful teacher manages, avoids, foresees. The teacher of high tone sheds an influence and creates an atmosphere.

A Graduated Course of Natural Science, experimental and theoretical, for schools and colleges. Part I. — First year's course, for elementary schools and the junior classes of colleges and technical schools. Part II. — Second and third year's course, for the intermediate classes of colleges and technical schools. By Benjamin Loewy. London and New York: Macmillan & Co.

The nomenclature of these titles is English. We should say the books are intended for the entire range of teaching in physics and chemistry below the college. The earlier portion of Part I. clearly contemplates pupils in our grammar grades. There seems to be nothing in Part II. that our preparatory schools could not or should not include in a thorough course in science.

Mr. Loewy's plan adapts itself to the modern methods of research, observation, and deduction. The schoolroom is to become a laboratory, each pupil is to have his apparatus and perform his own experiment. This idea has been for some time making its way in our better schools, and a few teachers have found out for themselves that a costly outfit of material is by no means necessary to the achievement of successful results. Many teachers, however, need to be shown with what principles it is wise to begin, with what illustrations these principles can be shown most clearly in operation, what rudimentary apparatus can best be collected, and how this apparatus can be used by a considerable number of pupils working simultaneously. The teacher in a grammar school quite naturally sighs for such a laboratory as she knows exists in the high schools; and she needs to be told that such a laboratory is not indispensable.

These books of Mr. Loewy are just the ones that a teacher of science needing such help and guidance as we have suggested, may confidently procure as a wise investment of a little money. The recently published recommendations by New England college presidents as to science work in grammar schools, are giving new impetus to the kind of teaching which these books inculcate. Their appearance in America is happily coincident with this renewal of interest.

Teachers' Professional Library. *Outline of the Principles of Education.* By J. A. Reinhart, Ph. D., author of "Outline of the History of Education." New York and Chicago: E. L. Kellogg & Co. 1891.

Outline of the History of Education. With chronological table, suggestions, and test questions. By J. A. Reinhart, Ph. D., author of "Outline of the Principles of Education." New York and Chicago: E. L. Kellogg & Co. 1891.

Studies in Nature and Language Lessons. Based on the theory that experience and expression should go hand in hand. Designed for use in the intermediate grades of educational work, whether in public or private schools. Arranged by T. Berry Smith, A. M., of Central College, Fayette, Mo. Boston: D. C. Heath & Co., Publishers. 1890.

The Graphic Progressive Dictation Blanks. No. 1. Designed to teach Punctuation, and the use of Capitals. By Kate O'Neill. A. Lovell & Co., New York.

The Students' Series of Latin Classics. *Latin Prose Composition.* For College Use. By Walter Miller. Part II. Based upon Cicero, Cato Maior and Laelius. Leach, Shewell & Sanborn, Boston and New York. 1891.

An Elementary Treatise on the Differential and Integral Calculus, with Examples and Applications. By George A. Osborne, S. B., Professor of Mathematics in Massachusetts Institute of Technology. Boston and New York: Leach, Shewell & Sanborn. 1891.

Heath's Modern Language Series.

Immensee. Von Theodor Storm. With English notes and a German-English vocabulary by Dr. Wilhelm Bernhardt. Boston: D. C. Heath & Co., Publishers, 1891.

A Briefer Practical Rhetoric by J. Scott Clark, A. M., Professor of Rhetoric in the College of Liberal Arts, Syracuse University. New York: Henry Holt and Company. 1891.

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10. Hawthorne's Biographical Stories. [29 and 10 also in one vol., board covers, 40 cents.]
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21. Benjamin Franklin's Poor Richard's Almanac, and Other papers.

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30. Lowell's Vision of Sir Launfal, and Other Pieces.
31. Holmes's My Hunt after the Captain, and Other Papers.
32. Abraham Lincoln's Gettysburg Speech, and Other Papers.

33, 34, 35. Longfellow's Tales of a Wayside Inn. In three parts. [The three parts also in one vol., board covers, 50 c.]

36. John Burroughs's Sharp Eyes, and Other Papers.‡‡
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From "*English Literature in the Schools.*" *A Paper read at the New Hampshire State Teachers' Association, at Concord, Nov.* 13, 1891. *By Samuel Thurber, Master of the Girls' High School, Boston, Mass.* [The paper is reprinted in this number of the Academy].

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THE EMPHASIS IN THE TEACHING OF ENGLISH.

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OUT of the conflict of opinion in the educational world there comes one note of seeming harmony. We may have a Greek party and an anti-Greek, anti-fetich, modern-side party; a manual training party and an anti-manual training party; a party *pro* and a party *anti* a score of things, but there is no anti-English party. Public-school and private-school men unite with college and university men in urging the importance of the teaching of English; parents who, in selecting courses for their children, are in doubt about other things, are in no doubt about this; the professional and the business world may hesitate about our Latin, our physics, and what they are too often pleased to call our "other tom-fooleries," but they have no hesitation in approving the study of English. The magazines and the daily press, partisan or unpartisan, subsidized or unsubsidized, agree; and, a little husky through shouting its own glories and the public school's failures, comes the approving voice of the Commercial College — with a capital C — as if the veritable "last man" were joining the "innumerable caravan."

It is pleasant to find above the destroying flood this Ararat of English on which to rest the ark of our educational hope; and, in view of its saving capacity, it is not strange to see some crowding and confusion, and some disputing as to the best way of getting under the protecting gopher wood. The complaints of grammar schools that the English foundations are not well laid in the primary schools; of the high schools, that the grammar schools are weak in this subject; of the colleges, that the high schools do poor work here; and of the great world, that the colleges send out too many graduates poor in English, only make more clear the general agreement that English is all important; and the main reason for such wide-spread dissatisfaction with English results, in the midst of universal praise of the subject,— indeed, the main reason for the too general failure to secure good results in the midst of so much earnest striving,— is that there is no agreement as to where the main emphasis in English teaching should be; what should be the end, and what the means, what principal and what subordinate. There is a chaos of good purpose needing centripetency.

The actual condition of English teaching is doubtless somewhat better than it was two or three years ago, when a committee of Massachusetts teachers, of which the writer was one, made a careful study of the situation. But probably the improvement is not so great as to make the following statement, quoted almost *verbatim* from their report, substantially untrue to-day.

1st, Grammar. In somewhat less than one-half of the high schools of Massachusetts, English grammar receives no attention as a distinct study. All report some attention to grammatical principles in connection with English literature and composition; but it is difficult to estimate the amount and value of this work.

2nd, Rhetoric. Most Massachusetts high schools have the study of formal rhetoric, and give to it considerable time. There is much reason to fear that the principles of rhetoric too rarely bear in the minds of the pupils any definite relation to their own composition.

3rd, English Literature. There is evidence of increasing appreciation of the value of this subject. It is only in a very few places, however, that the study of masterpieces is continued through the course; more generally one year, or a part of one year, is devoted to it, and in most schools the whole study is optional, while a very large proportion of the schools rely mainly upon some manual of English literature. More than eighty per cent of the teachers pronounce in favor of fully annotated editions of authors, while only a few vigorously protest against such editions. It is clear that a spirit of minute and searching verbal criticism dominates much of the teaching.

4th, English Composition. There is a remarkable difference in the number and length of the essays required in the different schools, and in the estimate made of the value of such work in relation to English. Not far from half report that essays are required once a month. Only a few schools require careful composition work under the eye of the teacher. The written exercises in other subjects vary in frequency, and are seldom examined as exercises in English. A few schools use a treatise on composition. Methods of getting the best value out of composition work are little considered.

Such is a brief summary of what was found in Massachusetts. The great variety of aims and the too generally unsteady aim are noticeable features in the midst of much evidence of earnest work, improving methods, and fair results in subordinate and narrow fields. A careful review of the situation forces the conviction that despite all the cry about the importance of English, high schools have not yet realized its importance. A few large schools favorably officered, and especially some fitting schools, have been alive to the matter. In them, Greek may come and Science may go, but English goes on forever. But in the mass of smaller schools,— in which small classes furnish superior opportunities,— and in too many of the larger schools also, little except routine work has been done. This stifling of English by giving it so little time, is not more noticeable in the reports of many schools than is the misdirected energy shown in others, either in purposeless work or in emphasis of the subordinate things,— a halting to explore by-paths, resulting in failure to reach the true end of the journey.

What is the vital point in English? Years ago, when English grammar was defined as the "art of speaking and writing the English language correctly," speaking and writing the English language correctly was thought to be the vital spot at which to aim, and English grammar, if only loaded heavily enough, the trusty weapon. Experience with it seemed to prove it a bungling, unreliable weapon, a sort of flint-lock, perhaps, that made a great roar and smoke, and too often kicked the holder without hitting the target. We abandoned our English grammar, or we mixed our shot with sugar and named the compound "language lessons." Did we change our aim? Was speaking and writing the English language the object? Was it the object of our rhetoric, of our biographical hand-books miscalled English literature, of our compositions, so important for exhibition days and for visits of the committee? With all our modern breech loaders which have banished that old queen's arm, English grammar, do we still agree with the elders as to what is the noblest game of the forest, and do we try to bring that down? Who of us that has been a dozen years in the profession has not rejoiced to see the English masterpieces become the staple reading of so many of our schools, taking the place of books about literature and of those dishes of literary giblets which formerly ruled in our class-rooms? But has our aim changed? Is it to help us speak and write the English language correctly that we read these noble things, or is it that out of them we may teach rhetoric, grammar, history, geography, philosophy? And even when we have rightly thought a cultivated taste and a love of good books a highly desirable end, have we, while not sacrificing all that is grand in these things, been seeking also the practical end of correct English speaking and writing?

There is no doubt what the great world thinks should be our aim, if its ideas are correctly voiced by the best journals or by the current criticism of merchants and professional men. The end they think of is a practical one; "How can your graduates write?" is the question they ask. Happily for those who have to prepare students for college, the aim in English work is settled for them by most of the colleges. It is nearly a score of years since Harvard College dropped its examination in English grammar, because English grammar was not taught practically, and substituted an examination in *English*, making ability to write correctly the test of fitness to enter its doors. Why, after so many years, are the colleges so dissatisfied with the work in English? Is it because the teachers o high schools, and even of fitting schools, have not yet answered the call of the colleges and have not put enough emphasis in the right place?

An examination of our schools as a whole will disclose, probably, not that rhetoric is very badly taught; not that English grammar is not just as profitable and entertaining as it ever was; not that English texts are not studied critically enough, nor that infinite pains is not taken to amass information about literature; but that these are not subordinated to the principal thing, to speak and write the English language correctly; and that, because they are not properly subordinated, English composition, which should have the main place in English study, is too little and too carelessly regarded.

In general, then, let us urge that the emphasis be so increased that English shall no longer be a thing of shreds and patches, but a well organized whole of vitally related parts; no longer be optional anywhere, but required everywhere; no longer be crowded into one hour of each week, and one year of the course, but given room in many hours of all the weeks of the fullest course; no longer be a matter for odd moments or one of mere parade, but a constant, benignant presence, commanding its own special attention and recognized as a welcome and important visitor in the rooms of every subject in the high school course; and, most essential, let the special emphasis be upon composition work. Rhetoric and grammar will then fall into right relation, not as special studies by themselves, but as they may be related to practical work. It is more than likely that text-books in these subjects will be much less used, unless they are changed in methods and are more directly helpful to good writing. In this arranging of principal and subordinate, English-literature history manuals will go into the list of reference books, while the English masterpieces will be made very prominent.

We shall linger lovingly with these, remembering the fable of the Persian poet who says: "One day as I was in the bath, a friend put into my hand a piece of scented clay; I took it and said to it, 'Art thou musk or ambergris, for I am charmed with thy perfume?' It answered, 'I was, indeed, a despicable piece of earth, but I was some time in the company of the rose, and the quality of my sweet companion was communicated to me; otherwise I should have presented forever the form and character of a worthless clod.'" So of the companionship of good books. These, too, are fragrance giving. They stimulate the mind and give it wealth of thought, as well as of vocabulary; they direct its powers while they cultivate the taste and rejoice the heart; thus furnishing material, model, and motive for the best expression, and being the best helps to composition.

In emphasizing composition, then, first, read much. It is easy enough to get reading done, but not easy to get it done well. Let the reading be done intelligently, both aloud and in silence, both at home and in school. Let it be with such explanation and question as shall enliven and enrich the reading without halting the mind or drawing it from the road; as shall stimulate the faculties without adding new burdens too grievous to be borne, burying the text under the weight of comment and note study, as one may see in the Italian mountains a little donkey, buried under its weight of brushwood, still struggling along, but causing the spectator to wonder at the source of motion within the cubic rod of fagots. Do not kill the life out of what is read and defend the vivisection by a show of specimens preserved in note books.

Second, set pupils to writing as soon as possible upon some live topic, and have them write a little, often.

Third, examine this; make it the basis of composition instruction with the class as a whole, and with the individual pupils, requiring them to do the work of correction where you have suggested the need.

Fourth, keep up this work regularly and persistently, demanding, expecting, and getting constantly improving results.

In brief then, read, write, examine, and teach. Write again and again, and so on to the end of the chapter. Because the reading of good books is pleasant and easy to manage, and because the teaching of composition is hard and full of drudgery, "literature" is popular with pupil and teacher and constitutes the whole of "English" in too many schools. If there is composition work it is infrequent, perfunctory, and is the basis of no teaching, and, therefore, of little improvement. The compositions are based upon the encyclopedias, are too often so sinfully long as to forbid fair criticism and stimulating comment by the teacher. There is but one road to success in learning to speak and write the English language correctly; that road is much reading, speaking, and writing of the English language; the goal will not be reached if we stop at the first mile-stone. Teachers can and must find time to make their classes not only read much, but also write often, under careful oversight and instruction, with constant revision, rewriting, and improvement. The method is simple; it admits of a thousand variations.

Here is a record of a part of the work of a class of forty boys in their last year in a fitting school; it is a record that, in its details is unlike the work of any previous or succeeding first class in this school; but while there have been differences of administration and diversities of operation with various classes, there has been substantially the same spirit.

The class read for a whole month before they touched pen to paper in the way of formal essay. The month was a highly profitable one. The pupils were getting ready. This class read at home two chapters a day, three days in the week, in Hawthorne's *The House of Seven Gables.* The recitation periods of this month were employed in several ways. Perhaps ten minutes of each of the twelve hours of the month were occupied by pupils in answering, sometimes orally, sometimes in writing, questions relating to the chapters read. The object was to keep every scholar to his daily task of home reading; to see that the book was being well read, and that the spirit as well as the letter of the story was appreciated; and to direct he pupils to many things likely to be unnoticed.

The rest of the recitation time was taken up in reading aloud in the class Macaulay's *Lord Clive*, while each day the teacher questioned on the previous reading in order to help pupils keep the connection; there was just enough study of geography to make the scenes clear; just enough of comment on Macaulay's style and allusions to keep interest high; just enough dictionary study to help pronounce and understand a few of the frequently recurring unfamiliar words; and just enough elocution to bring out the sense. While this was going on, several short papers, as before mentioned, requiring about ten minutes each for answers to one or two questions about the home or the oral reading, served to fix what was read, but also served for practice in expression, in spelling, punctuation, syntax, form; serving for this purpose, quite as well, perhaps, as long essays, and not embarrassing the teacher with a large amount of correction. Of course brief time was taken in the succeeding hour to teach the principles, ignorance of which had been shown in these short papers. So, with home and school reading, brief oral or written comment thereupon, and instruction based upon needs shown in these written papers, the month passed.

The reading of the two books being finished, formal composition was in order. The teacher proceeded to get at a subject. He asked the class how many liked *The House of Seven Gables* well enough to recommend it to a friend. Three-fourths of the class did. An eighth of the class would advise friends not to read it. The rest were neutral. What more natural then, than to have the three-quarters recommend the book to a friend, a real friend, with force enough to persuade to a reading; to have the eighth advise their friends to avoid the book for good reasons; to ask the remainder to show why they were so indifferent to a book so strongly liked by a large majority. Other subjects, perhaps, would be as serviceable; such a method of selecting a subject had the advantage of giving interior impulses to write prominence over exterior impulses, and where that is possible, it is always desirable; for when the pupil wants to write, thinks he has something to say, sees no reason why he should not wreak himself on the paper before him, then all is well. It is just the absence of these conditions that makes most systems of composition so deadening, and it is the presence of this impulse which should be sought in all the details of method, even after the subject is selected. Happy the teacher who can secure in his compositions the presence of the real boy or girl, simple, natural, willing, and free from extreme self-consciousness.

A formal composition may be of three sorts in the school of which we are talking: — first, it may be written at home, upon a previously assigned subject; and nothing is more important than that in most cases teachers should select the subjects. These home essays open the way for getting knowledge from the encyclopedias and from friends, and are, on that account, less valuable for our purpose, because they do not always fairly mirror our pupils. Second, the essay may be prepared at home in the shape of notes, or may be written in full; in both cases care must be taken to have the work subject to examination for proof of preparation. The final essay is to be written in the recitation hour, generally without recourse to the first draft, or even to the notes, which, however, have served their purpose of preparation. Third,— and this is the method generally to be pursued,— the essays may be sight essays. The subject is assigned, and the pupils go immediately to work upon it,— the work of previous days being assumed as ample preparation. In two of these three methods,— many variations of all being possible,— the work is mainly, and in the third wholly, done under the eye of the teacher. To have the work so done is very important.

Now suppose we are trying this sight method. The only available aid is the dictionary. Every scholar has a small dictionary, and is encouraged to use it as he writes; for when should we use a dictionary, if not at the moment when we feel the need of it? By and by it may be wise to try compositions without the use of a dictionary, to see how well that book has been mastered. The pupil writes for half or three-quarters of an hour, quality not quantity being the well understood requisite, since short essays are for almost all purposes as valuable as long ones, and short essays, frequently written, are many times more valuable than long essays at long intervals.

An ordinary teacher may do the work well up to this point; an extraordinary one may fail just here; for in the teacher's review of these compositions, and in the subsequent instruction given to the pupil upon matter suggested by the essays, the most liberal allowance of time, the most patient drudgery, the most abundant tact, the most constant good nature, added to ample knowledge and personal magnetism, are not too much to ask as sureties of success. If the class is large, the essays long or careless, the teacher ignorant of labor-saving devices, and the time short, the case is well nigh hopeless. Here composition work fails. That there is such difficulty here is why essays are so infrequent in so many schools; but if English teaching is to be successful, here the battle must be fought. These papers must be corrected and then the class must be taught. Corrected? Reviewed, not corrected; for as the object is improvement through self-help, hardly any time could be less profitably spent than in mere correction of errors, in merely making right what is wrong.

A personal interview with the writer in which all the points of his paper may be discussed, at the same time that they are marked for the pupil's private review, would be the ideal way; even this would not remove the necessity for class instruction upon some of the errors, or for careful revision by the writer himself on the lines of the teacher's criticisms. It is impossible to command the time for this very often; but whatever is done must be done with two objects in view: first, to inform the pupil as fully as possible what he needs for his improvement, and second, to make the review in such a way as to require the pupil's coöperation in the corrections, guiding him to see his own errors.

The skilful teacher must know what to let alone. We are to allow something to exuberant youth, if the exuberance is not artificial; we are to distinguish between venial and deadly sins; we are not to overstep our province and trench upon that of the college professor by demanding much more than correctness; we may well reserve our helps to elegance and highest energy for the promising few; nor are we to be cast down because the promising few are very few, and a uniform, tedious mediocrity everywhere reigns. Carlyle is reported to have said: "England has forty millions, mostly fools." England is like the rest of the world. Be not disheartened. Even Washington was mediocre, so was Lincoln; which of your younglings is to be the world's pride you know not. But while we are sympathetic, let us be discriminatingly so. Be remorselessly severe with violations of principles previously thoroughly taught. A good slashing by an appreciative, friendly hand is helpful.

But how make the corrections answer the two ends mentioned: first, full information, and second, incentive to self-help? Do it by hints, by signs, by queries, using all sorts of devices to save labor; by comments in the margin, at the end, upon slips of paper, as elaborately written as the time will permit. An essay recently corrected by a co-laborer of the writer contained on the margin these words in red ink: "Two words misspelled in the first five lines." "Semi-colon instead of comma between tenth and fifteenth lines." These remarks set the boy to teaching himself, and an examination of his corrected work showed his success. Not always should the teacher thus darkly hint. It was found possible in the essays upon Hawthorne's novel previously referred to, to write on a slip of paper in each essay-book many comments, numbering the remarks to correspond to numbers in the essay. The comments were felt by the pupils to be very stimulating, and a memorandum of the numbers attached to flagrant errors made blackboard assignments for class correction easy.

The bane of this correctional work, this study of morbid intellectual anatomy, is that we come to revel in it. Teachers must not fail to praise the good. By the side of their interesting tumid, disjointed specimens, let them not fail to show healthful tissues, correct syntax, clear style. Discriminating praise must be blended with discriminating blame.

When the teacher's private work is done, we come to the second public hour upon these essays. Pupils are eager to see the compositions, anxious to know their mark, ardent to discuss, and to defend themselves. Let them have vent; guide, but do not suppress. Individual errors may be made subjects for class lessons. The main thing is to make sure that the teacher's work in correcting is not wasted, that the scholars understand the principles, that they correct the errors, and even re-write at least parts of the essays for a second correction. "Yes, yes," they say, and "I see;" but they see only that there is an error; why an error and how to correct must be taught and learned now. If you have made a classified collection of errors from the books, either by copying, or, better, by marking with a distinguishing sign, have these corrected orally or put upon the board by the authors and made the subject of criticism. Go among the pupils and make them tell you why you criticised certain parts, and how they propose to correct. If a pupil can say of any point corrected in his essay, "I knew that before," he has imposed a needless task upon you, and ought to pay a penalty. Develop the desire for the highest excellence. After the pupils have privately studied, discussed, and digested the corrections, it is well to ask for a statement of what has been learned. "What have you learned in syntax, in punctuation?" etc., etc. From examples thus formulate principles. A boy recently told me that he had discovered that *which* must be preceded by a comma. No sooner was this said than an impulsive fellow cried out, "No, sir, my composition shows that it is just the other way; *which* must n't be preceded by a comma." Here was the opportunity for review of the old matter of explanatory and restrictive relative clauses. These are the golden opportunities. It is seed in good ground now. Does all this take several days? No matter how many, if the time is well spent; and all this time home reading may be carried on as before.

What then? Why, the same thing over again with variations, taking other subjects from the same books or from other sources; perhaps having five-line essays, single page essays, one hundred word essays, anything, everything that the teacher can find time to read, review, and instruct upon. In the class let the teacher occasionally comment upon the first five or ten lines of each essay. How many can write five lines without serious error? A school journal rightly managed may be a help in the English department, for the effect of cold lead upon pestiferous blundering is marvellous. Pupils see their work as real English when it is in print. Oral debates with written review, or written debates read aloud are serviceable. Exchange of essays for correction, or correction of essays of one class by another,— these are good if the teacher can find time to review the corrections and punish the wicked or careless judges as well as the careless or wicked judged, and especially, if, either during or after correction, judge and accused can meet face to face and argue the case, the teacher being in reserve as final umpire. Have the pupils preserve their essays, better in a blank book, and thus be able to face their past in the light of a better present, and give you power to punish second and third offences more severely than first ones.

In all this matter of correction by the pupils themselves, the one great trouble is this: they find errors where none exist. This is as true in the correction of essays as in the correction of a set of sentences from outside sources, known to contain errors. A variation of this tendency is the habit of changing the sentence to a known correct form for fear there may be an error, although none is really seen. Frown upon unnecessary changes; to alter,—to *alter*, what is well enough is as great an error as to fail to change what is wrong; and all corrections not made along the line of least resistance are not well made; hence, changes that do not exhibit exact knowledge as to what is wrong and what principles are violated are to be discounted. In this matter of corrections I refer not only to mistakes of grammar, but to all mistakes within the narrow compass of what may be called merely correct writing; but hints as to strength and elegance are always pertinent, especially with chosen pupils.

In addition to all this, there will be time for the review of English grammar in a practical way. Most of the New England colleges add to their examination in English composition a half hour's examination in correction of bad English. Much of the preparation for this may be done in the correction of the pupil's own work. Let us continue to have early training in formal grammar with a practical aim, but here in the higher classes let us have a review of English grammar, whether pupils are fitting for college or not.

The best review of English grammar for the time that may be given in such a class as we have been considering is a study of classified examples of bad English. There is a lingering notion, mainly among theorists, that the study of such examples dulls the grammatical sense. How can the correction of what is wrong, accompanied by the search for underlying principles, and the fixing of them in mind for correction of similar, but perhaps disguised errors, dull the grammatical sense? A study of morbid anatomy, of plants injurious to animals, of insects hurtful to vegetation, is not thought to be harmful. Can it be fairly argued that familiarity with grammatical errors for the purpose of analyzing those errors and showing why they are errors, is likely to breed such contempt of errors as to make the pupil use the wrong rather than the right forms? If it were a matter having to do with the eye only, as in spelling, it might be different. But this is a matter in which the logical faculties are called into exercise, where principles can be stated, and where reasons control the mental impressions. Besides, how necessary it is for fixing our own right habits, and particularly for enabling us to correct the writings of others, as in the college examinations, that we become familiar even to detestation with the protean shapes grammatical errors assume.

But if, as is very generally agreed, every consideration of pedagogical theory sustains the study of specimens of false syntax, experience confirms the value of such study. In no way can the grammatical sense so readily be quickened. In no way can so much work be done in so short a time and done so well as with a labor-and-time-saving machine in the shape of a book of carefully classified specimens of bad English; specimens that are not too childish or simple, and are from real life, and of rather frequent occurrence. The class, part of whose work has been here traced, used such a book and were greatly profited by its use. Its members have again and again testified to their delight in its study and the surprising practical advantages they gained with it. The teacher was saved very great labor by having an abundance of material with which to apply the laboratory method now so wisely in vogue in all teaching where it can be used. Occasional lessons in this book, either prepared at home or given at sight, wrought more for practical grammar and elementary rhetoric than had been accomplished in other years by tedious blackboard work and much lecturing.

There are several such books now; indeed, most good rhetorics recognize the advantage of such work and have specimens of incorrect English for the pupil's practice; but most of them do not have enough. If such a book cannot be used in class, the blackboard must be used or sentences must be dictated in as large numbers as possible.

We have now outlined the work of the class of which we have been talking. The place of the emphasis and the amount of emphasis upon the different parts of English study have been indicated. Three hours per week,— and less than three is too little in any class,— have been divided approximately as follows: One hour for reading aloud; one hour for writing short and long papers; and one hour for pupil's correction, study of teacher's correction, and of practical grammar and rhetoric exercises; the whole accompanied with home-reading, writing and study. This, or something like it, not for one year, but for all the years of all the schools, should be the rule.

Nor is this all the emphasis English can and should have. If it happens that the English master is a teacher of any other subject, let him be twice a teacher of English. If he is a teacher of English alone, let him seek allies in all the other departments. Let him be held partly to blame if the Latin or the Greek teachers, or any other teachers, are the natural enemies of his department. The other teachers will correct the faulty English of their papers, of course; they will lend him papers for his review, and, if he is courteously aggressive enough, they will emphasize English themselves, teaching their pupils that good English is not like the best coat, merely for Sundays and holidays, but a garment fit and necessary for the work-a-day world of Greek and mathematics and science, as well as for the rejoicing hours spent with the vernacular.

How shall our schools get the time, the teaching force, and all the means to give English its fitting emphasis? How shall we get, as Professor Briggs puts it, "elbow room for our teachers, and teachers who will use their elbows?" Certainly, never, if the teachers are content to be what Carlyle says all school-masters are, "down-bent, broken-hearted, under-foot martyrs." Our main trouble at present is that we do not use all the opportunities we have. Our main need, it must be confessed, is teachers alive to the situation. But we must better our opportunities by magnifying our office, demanding our right to advise, asserting our influence with the authorities and with the public, till the means are provided for putting sufficient emphasis in the right places, and till the high and the fitting schools, from richest to poorest, have the foundations of their efficiency laid deep in good English teaching. Then the complaints of the colleges, of the press, and of the public, will be stilled, because our graduates can speak and write the English language with reasonable correctness.

*THE OUTLOOK IN HIGHER EDUCATION.**

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THE year which has just ended has been one of the most important in all the history of higher education. During the past summer, after many years of effort, ten of the chief academies and professional schools of London united in a draft charter to form the new *Albert University*, a teaching university which, so far as we can now see, although two of the largest institutes still hold aloof, bids fair not only to give at last to the largest center of population in the world a fit modern temple of learning, but eventually to become one of the chief of its kind in the world[1]. France has lately united all parties on a bill which transforms its entire system of higher education into universities of the German type, with many important improvements upon that type[2]. The two leading academies of the seventeen institutes of France, Paris and Lyons, already accept the conditions of the bill. It now only remains for France to reconstruct her system of intermediate education (which, being dependent upon both primary and superior, is usually the last of the three to be affected by movements of reform) and she will then have re-created her entire system of education, a work which, in the language of a French statesman, "has engaged the best talent of the nation for fifteen years and increased the yearly educational budget over 700 per cent."

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* A paper read before the New England Association of Colleges and Preparatory Schools, at the sixth annual meeting, at Harvard University, Cambridge, Mass., Oct. 16, 1891. See THE ACADEMY for November, page 447.

[1] The new draft charter of the Albert University proposes a federation between the University and King's Colleges, both of which have a fully equipped teaching staff, and two of the leading hospitals and medical schools. All the federating bodies and the faculties are represented in the Council of forty which controls all. Although sixteen members of this Council are teachers, it is probable that little actual teaching will be done at present. There is no provision so far for reconstruction and for new chairs, or for any enlargement of the philosophical faculties. The entire scheme is on a much less elevated plane, and has no trace of the scientific ardor which has animated the policy of higher education in France for the last fifteen years, culminating in the new bill constituting true universities there. It is a general scheme of affiliation rather than federation. The University of London and the College of Physicians and Surgeons have so far declined to come in and take seats in the Council.

[2] The bill is long and detailed in itself and is printed with an introduction by E. Lavisse who has been perhaps its chief protagonist. After fifteen years of study the council reached the unanimous verdict that the university form is the best for organizing the higher education. The government realizes that superior education is the first and chief necessity, and that all primary

In Berlin, the new *Reichs Anstalt*[3], the organization of which was set on foot in 1877, begins its work this fall in its new building, costing about one million dollars, and a stone's throw from another

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and intermediate school work is but a system of canals to distribute what flows from this source, and that the highest education alone can form disciplined men capable of conceiving large and general ideas on the power and novelty of which now depends the influence of nations. This fundamental policy of the government is steadily and unremittingly pursued with growing influence over public opinion. There is to be a university council for higher, an academic council for intermediate, and a departmental council for elementary education. Each of the universities will have not only its own local spirit, but a local character. Subjects will be prominent in one that will not appear in others and this will introduce what has hitherto been almost unknown in France, a powerful spirit of emulation. The new universities are to bear the names of the cities where they are situated. A report is in preparation on the international equivalence of studies and degrees and on the ways of facilitating study by foreigners in France and by Frenchmen in other countries. Equality of degrees, studies, rights of professors in each university, is assured. Institutions which do not elect to come under the new law can retain all their present rights and remain academies.

[3] This magnificent new institution originated in a joint proposition made to the Reichstag by the several states of the North German Confederation. Work in both sections began in rented rooms in October, 1887. The new building, already in part occupied, has been delayed because in some departments, chiefly electrical, development has been so rapid of late that modifications have had to be continually made in order to keep it fully abreast with the state of science. The government holds that a laboratory building itself is the most valuable of all scientific instruments and that its proper construction may give a great vantage to all workers in it. A brief report of the scientific work accomplished by both sections up to 1891 has just been published in the *Zeitschrift für Instrumentenkunde* for April, 1891. Thus far most of the work of the scientific section has been thermometric, electrical, and optical. This section has been thus far the smaller, but much of the work of the practical section would commonly be called purely scientific. It is claimed by some that this *Anstalt* marks a period of greater scientific rigor of

single academic building costing about three million dollars[4]. This new *Anstalt* is not Prussian but German. It now has about forty workers with Helmholtz at their head, and has no students. It consists of two sections, a scientific and a practical. The former will devote itself solely to researches, especially those that are too large and long for university professors or institutes, or those overlooked by them. The *Anstalt* marks thus the first attempt to organize and coördinate research in the wide field of exact physical and chemical work. It will suggest and even direct work of this kind in any or all German universities. It thus takes a distinct step in advance and, while consecrated to research, will strive to make still more supreme the rapidly growing domain of science over all the modern arts, whether of peace or war.

Again, in April, Prussia, having up to that date refused to develop its law schools along with other university departments, partly through the same fear of breeding a revolutionary spirit that caused their proposed suppression in several South American states, Germany has at last realized that its bar had become incompetent to develop and direct the new forms of business demanded by its rapidly growing industrial and commercial life; that legislation had

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method generally, a rigor that will require some work now currently accepted in more than one field to be gone over again. It also marks a far wider and more immediate influence of science upon industry which will tend to give the latter a scientific character, never enjoyed by it before.

The statutes place the *Anstalt* under the Minister of the Interior and forbid the taking of patents for any of the discoveries or inventions made there. It is governed by a board of curators who are scientific men and of which the president of the *Anstalt*, Helmholtz, is a member. The president of the board is named by the emperor. Members serve for five years without pay, meeting yearly in March to hear the report and plans of the president. The latter directs all scientific work, determines just what shall be undertaken, and by whom, where, and when. He also decides who shall be the chief worker and who the helper, as well as where and when all results shall be printed. These latter must all be published with the utmost promptness. Besides members, assistants and voluntary helpers may be received, and also scientific guests, who may either learn processes or undertake researches.

[4] This building, erected in 1879–83, cost $2,300,000, was planned by Lucae and Stüve, and is designed for 2,000 students. Its dimensions are 224 by 65 meters. It has five courts and is built in high Renaissance and Hellenic style. A noble chemical building stands beside it, with another for testing building material near.

grown confused and uncertain, and that judges had become so incompetent that the mal-enforcement of even criminal law had resulted in increase of crime — begun to reconstruct its legal education as the only effective cure for these growing evils. Business needs and the need of better legislation generally, have thus compelled Prussia to abandon the *laisser faire* policy of Bismarck with regard to legal education and to begin the great work of elevating this department of the university to the high level of the medical, technical and philosophical faculties[5].

Again, having a few years ago completed the rebuilding of the University of Strasburg, on soil won from France in 1870, and with her indemnity money, on a scale of remarkable architectural magnificence[6], (thirteen new buildings in all without dormitories), as if to show to the neighboring academy of Nancy, and to all France, what Germany could do for higher culture — Prussia next totally rebuilt the University of Kiel, on what, till 1866 was Danish soil, as if in rivalry to the University of Copenhagen; then Halle, as if to compete with Saxon Leipsic. This year Prussia has advanced far towards completion the rebuilding of Breslau as an intellectual fortress against Russia and her German university at Dorpat; and seems now beginning similarly to rebuild and to strengthen the work of teaching and research at Bonn and Göttingen as it has all the while been enlarging the University of Berlin as if in rivalry to all the world besides.

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[5] Besides prolonging legal studies from three to four years it is proposed to prescribe parts of the course and to enforce attendance. Candidates must write with their own hand their *Curriculum Vitae*, state in what courses of the university they took particular interest and must submit one or more of their seminary papers. They must also present an attestation of having served one year as a voluntary soldier. The written part of the examination consists of a thesis on a subject chosen practically in accordance with the taste of the candidate and for the composition of which six weeks are allowed. These state examinations are made public and two of the students' instructors have a place on the board, which consists of four members besides the jurists. Since April 1st, 1891, Prussia is divided into examination districts, each attached to a university. Students choose their districts freely but must pass the last semester where they are to be examined. Thus liberty of migration from one university to another is restricted, smaller universities are made more nearly equal to the larger, the tendency to centralization is checked, and "half studies," it is thought, will be broken up.

[6] The elevations of these buildings are depicted in a beautiful souvenir book with fifteen plates by I. Kraemer, the text having been written by Dr. A. Schricker. The scientific buildings are given with ground plans and fuller descriptions in the *Fest-Schrift* of the meeting of German naturalists and doctors in 1885. These buildings are on the whole the best and most expensive of all architectural embodiments of the German university ideals. They are separated by an interval of nearly a mile into two groups, one for the medical and another for the other faculties. The first group comprises separate buildings for physiology, anatomy, pathology, physiological chemistry, surgical clinic, psychiatric clinic, lying-in clinic, and a pharmacological institute. The cost of these buildings, with ground, is nearly a million and a quarter dollars. The other group contains a magnificent general building, two for astronomy, and separate buildings for chemistry, physics and botany. The cost of this group was nearly two million dollars, of which the German government gave half. So far as buildings go, this is the model university of Germany.

In this country a new university was opened on the Pacific coast last month, for which its president expects far larger resources than are now enjoyed by any in the land, and where students are freed from all fees.

On the first day of September, after years of effort, and at a probable eventually added cost to the government of between three or four million pounds sterling per annum, the Government schools of England became practically free. In Prussia, as a result of the famous convention of December last[7], — the proceedings of which, by the way, a volume of nearly one thousand pages, were printed and distributed in only a little over four weeks, — a class of so-called "new German" schools are being developed, as severely modern as are the intermediate schools of Sweden[8] devoted to the study of the present in both time and place, and relegating the study of antiquity to the university.

But no mere list of institutions or movements for a single year, even were the list ever so complete, could give an adequate idea of the wide, deep, and constantly accelerating progress in education, which made the year 1870 almost an anno domini of education and promises to make the last quarter of this century remarkable hereafter as the educational era of the world's history. Systems of schools, thousands in number and culminating in colleges and universities, are now established not only in Australia, India, and New Zealand, but in nearly all the smaller British colonies. The school system of New Zealand was lately pronounced by a well known London inspector, after reading its last ponderous blue book report, to be one of the best, if not the very best, in all the British domains.

[7] See The Academy for March, 1891.

See The Pedagogical Seminary, Vol. I., No. 1, p. 53.

France has adopted the same colonial policy of education and now has 100,000 children well schooled in Algeria alone, and so has Russia among the, till lately, wild tribes of her southern and eastern territory. Missions now everywhere develop schools as the most effective means of religious propaganda. Since 1868, the year *one* of her new era, Japan has almost transformed and Occidentalized her national life by means of her new educational system[9]. In nearly every South American state, led of course by the Argentine Republic and Chili, comprehensive educational systems are established. With few exceptions, every European state is annually increasing its educational budget, and expanding and perfecting its system. In this country we are now expending over one hundred and seventy million dollars per year upon 378,000 teachers in the lower schools alone, a sum larger than is spent upon any other department of the public service, and much larger than in any other land.

Thus, education has become a, if not *the*, leading agency in colonization, religious propaganda, industrial supremacy, and good government, whether monarchical or democratic, and in all forms of international competition. Schools multiply with every advance along any of these lines to each of which they have become a prime necessity. Indeed, education is now almost the one thing in which everybody profoundly believes. Men and women differ ever so widely in culture, creed, politics, rank, and race, but the world now unites in a deep and strong faith in the power of curriculized knowledge to prevent a lapse to barbarism, and to insure general progress and success, political and industrial. Education might almost be described as a new and larger Catholicism; a new church universal, of which all Christians together are but a part, with the basal elements of modern science and learning canonized into its curricula. Its *semper ubique et ab omnibus* is not a doctrine but a fact, an institution controlling the bodies and minds of its votaries five or six hours per day, five or six days per week. Where does all history show broader consensus, a deeper faith, a greater uniformity in creed or institution?

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[9] Since the Restoration of 1868, which is year *one* of the new dynastic era of Meiji, Japan has undergone an educational reconstruction which has, perhaps, no precedent in history. The records of this extraordinary movement are contained in seventeen annual reports of the minister of state for education. The later ones are in English, and the last is dated the 22nd year of Meiji (1889), and was published in 1891. Valuable information is also found in the English calendars of the University and in an official volume entitled, "Outlines of a modern education in Japan" which with many tables was issued in 1888. The number of changes in the system has been remarkable, but year by year they have become less and less radical and on the whole the system is at present tolerably settled and complete. Whether as an illustration of wise methods of organization, undaunted energy and patience in the face of great difficulties and opposition, or as a triumphant vindication of the power of education as the most all-transforming instrument of state, the world has, perhaps, seen nothing to compare with it. One of the early features of the imperial policy was to send the best native students to other countries at state expense. Ten years or more ago the number of these students abroad averaged more than three hundred. Now it has gradually been reduced to twenty-one. They were generally sent to study some special subject and commonly remained for several years in the same place. Most of them returned and became professors, teachers or officials of higher grade, but a few have shown such marked ability that they have been induced to settle at the foreign universities where they studied. On the other hand, many of the most promising young men of other countries have been employed for a term of years, at generous salaries, to go to Japan to teach in their own languages, and aid in organizing the scientific and educational

work of the country. The number of these is now rapidly decreasing, as native attainments increase. The university calendars in every department show native professors who have taken degrees at Oxford, Berlin, or some American university, or a licencié from Paris. Thus nearly every leading institution in the world is represented in the faculty and a most fruitful interchange of methods and ideas is assured.

The University consists of five colleges, of law, medicine, engineering, literature, and science, and University Hall. Only graduates of one of the five colleges can enter the Hall. This latter is the apex of the system. Only the best students, able to engage in research are admitted. To them are given livings, and special grants are made to them for approved investigations, expeditions, etc. Their fitness to undertake the topics of research which they propose, as well as the importance of the subject to be investigated, is considered before their admission, and afterwards their work is personally aided and directed by a professor. They must also pursue courses which lead to a degree within five years at most. The object of the university is to teach such arts and sciences as are required for the purposes of the state and the prosecution of original investigations in the arts and sciences. The Hall is chiefly for research and the colleges are for instruction. All is immediately under the minister and is supported by the state. There is no instruction in religion or theology of any kind. All fees are set apart to accumulate a fund.

The university is situated in extensive grounds near Tokio, the botanical gardens, the observatory, the marine station, hospitals, the seismological observatory, etc., being not far away. An electric light company, a cotton spinning company, mining firms, railways, agricultural societies, and various other associations have established university scholarships on condition that

While the higher and lower education always act and react upon each other, it has been the higher that has always especially controlled and reformed the lower. The university shapes the college and all technical grades; the college shapes the preparatory school; the high shapes the grammar school; the town academy, the district school. Most educational influences work from above downwards. The introduction to the new university law in France even goes so far as to say that all educational institutions of lower grade are but a system of canals to distribute and apply the science and culture wrought out at the universities. Universities have long determined the intellectual level, the utility and efficiency of the three learned professions. The practice of medicine was raised to a position of dignity and influence that it never enjoyed before by the new physiology of Johannes Müller and his successors, and the work it stimulated in allied departments. Helmholtz's invention of the ophthalmoscope made a new department of medical practice, the develop-

the appointee serve the company after graduation. A few private citizens have founded scholarships to advance special courses. There are also many loan scholarships. There are special courses in military science, naval architecture and pedagogics. The library contains 180,000 volumes.

There are now in Japan about 26,000 elementary schools. The country is divided into about 10,000 school districts. There are 3,252 directors, 25,000 teachers, 37,000 pupil teachers, and the total school population is seven millions, of whom nearly one-half are now receiving instruction. There are now forty-nine middle schools, 602 instructors and 10,441 pupils. There are also normal schools, sixty-seven special schools, ninety kindergartens, and an educational museum with 25,619 objects, with lecture courses and with an agency for the purpose of the purchase of scientific apparatus abroad. The latter function is soon to be discontinued as good apparatus is made and specimens are well mounted at home. The department of education devotes much attention to the compilation and selection of text-books upon which the efficiency of instruction so largely depends. Some were made by the normal school, others by a bureau of compilation. The list of approved books has been revised eleven times. No books can be adopted or changed without the permission of the educational department. The report says, "The great question of the present time is to decide the method of supplying text-books."

There are now ten educational magazines published in Japan. Save Chinese and Japanese language and literature, all the culture of the entire system is now European. The end of knowledge is defined to be the cultivation of moral character, the development of loyalty, patriotism, courage, dignity and sympathy. It is very sad to learn, however, that the reactionary party has just succeeded in greatly reducing the annual appropriation, and thus is seriously threatening the whole system.

ment of which was so great and rapid that even Graefe, its founder, said he was unable to follow it. How many more precious human lives have been saved by antiseptic surgery alone than it cost animals, which Lister felt it the most imperative yet most painful duty of his life to sacrifice, in discovering it. The doctrine of the specific energy of nerves, which Helmholtz calls as important as the law of gravity; the discoveries of Pasteur and Koch; the new laboratories of pharmacology, where the nature and effect of new chemical compounds and old drugs upon the animal system are explored; laboratories of hygiene and pathology, where all the conditions of health and infection are carefully studied; it is because these and other university institutes have been so productive, and because even the busiest practitioners have learned to follow their work so closely, and applied their results so diligently, that the medical profession is to-day more influential and more useful than ever in the world before. It is precisely this greater power and influence that not only the law and the ministry, but industries, all the arts of peace and of war, now demand from the various departments of the university. More and more the command of the world's markets and success in war depend upon the state of science. International competition rests more and more upon chemical, electrical, geological art and science. More and more it is the biological sciences, (which treat of life, health, reproduction, and disease) that begin with the lowest and lead to the top of the evolutionary ladder, that are giving shape to our ideas of living nature and society, and are reënforcing the highest religious and philosophical ideas. It is new conditions like these that now give to universities greatly enlarged functions, new problems, and, indeed, they are fast giving to the very word university a new meaning. In the figure of Liard, the leading nations of the world are now seeking a new principle of life in universities. More and more they initiate and regulate progress. They train the experts who, in all departments of life, now rule the world. Universities have become the leading question of our age, their patronage is the chief glory of the modern state and their discoveries now kindle the brightest lights upon the muses' sacred hill.

To discharge these and other manifold new functions, and to guard against many new dangers, higher education is now being re-organized the world over. The policy that has for its end more men and more money was never more indispensable, but the *new* university organization of which I speak is internal rather than external, and places the interests of science before those of institutions. The chief end of most of the new measures of which I shall first speak to-night is to separate talent from mediocrity among both professors and students by lines that are broad and obvious, and, while doing no less for average men, to give the best far larger opportunity and incentive than they have had before. The over-production of academic mediocrity is a good measure of the under-production of excellence. Mass teaching must go on, but the higher pedagogy is now working out individual methods fit only for the best five or ten men in every hundred, by which, talent, the most precious possession in modern life, is brought to fullest maturity.

Let us glance at a few of these new methods.

First, the *modern* as distinct from the mediæval, Fellowship system carefully selects, and no less carefully guides, a few choice advanced and superior men in the later and critical stages of their preparation for professorships and other posts of public and private leadership. A Fellow is more and more an apprentice of the Professor. His methods and reading are stimulated by daily and familiar interviews or joint work with the professor; the best resources of the institution are a soil for his most rapid growth. The new charity is often called a science as well as a virtue, because it is wrong to give doles to beggars without an efficient agency to ensure that the gift will do good and will not do its recipient harm. The same law and the same danger hold in awarding Fellowships. This consideration was especially dominant in the reconstructions in France, where individuals can now for the first time coöperate with the state in establishing them, and it is more and more prominent in Germany. If the mass teaching of average minds always breeds the danger of routine and dead mechanism, it is in the instruction of a few superior and advanced youth that teaching becomes a holy passion, which makes us feel indeed, as Plato so vigorously held, that in all the world there is no object more worthy of love, reverence, and service than eugenic, eupeptic, gifted young men, in whom is the hope of the world. Fellowships are old, but the system has been reconstructed in England, yet more lately enlarged and placed on an higher basis and adopted by the government in France, has been particularly prominent in some of its various forms in nearly all the new higher institutions founded within the last decade or two, as a method of working from the top downward, by which a new institution in fewest years sees its graduates in highest places and attains soonest to large public usefulness. Some of the best scientific work of recent years has been done by young men thus guided.

A second method of separating talent from mediocrity is the seminary system, which has in late years added a small but higher story to continental universities. These, as every one knows, are small groups or teams of advanced men working on methods quite as much as on results, and in the closest and most informal association with the instructors. In continental Europe the seminary is usually immediately under the minister of education and accountable to him and not to the university. It has from the ministry its special statutes and funds. No department not well established, strong, and of cardinal importance is granted the privilege of organizing a seminary; and permission is often withheld. To be appointed its director is a special honor to any professor, and to get into it is an honor for the student, for its members are few and usually limited by its organic law. In not a few universities pro-seminaries to fit students for seminaries have now been organized. In these pedagogical *adyta* great masters inspire, and pass on the torch of learning to their chosen disciples. How to study, methods of research, original sources of information, critical and independent judgment, the style, method, spirit of the master are imparted by induction, and not a few of the most important recent advances in human knowledge have been the direct fruit of the methods of the seminary; but a single commonplace member spoils its tone, and a commonplace professor can only parody it.

The modern laboratory of research (as distinct from a practice laboratory) depends no less upon the rigor of its exclusiveness. The physiological laboratory of Leipzig, e. g., is a large building, yet receives but from eight to ten men, and usually has less. Yet in the quarter of a century of its existence it has trained most of the best professors of physiology throughout the world and its work has enriched the entire medical profession with new facts, principles, and knowledge of the highest practical and scientific value. Beloved and admired as its great leader Ludwig is by all the experts of the world, he is little known outside, and how many thousands owe life and health to his researches who never heard his name!

The like might be said of other leaders and laboratories. The most of the greatest leaders habitually work with half a dozen men or less. France sifts out from all its educational systems the few best each year for the state aid and other special privileges and incentives of its great *Ecole Pratique*[10], and its school of politics[11]. Japan by the last report had twenty-three men in its University Hall, built at great expense to complete the training of the few best for the service of science and the state. All these and many more are new and higher stories in Bacon's House of Solomon.

Not only students, but professors, are distinguished, the best from the common average. In France, the few best professors are not only placed on the staff of the *Ecole pratique*, but even their pay is increased. Again, led by Breslau and Göttingen, several of the best German universities are forming select academies of their own élite instructors and rigorously excluding all but the best. Led by Vienna, the docent system in many places is now so modified that the brightest young scholars can compete for fees and pupils almost on even terms with older professors in ways that have proven a powerful stimulus to both. Led by Halle and Kiel, every Prussian university must by a recent order of the Cultus-minister henceforth publish each year a chronicle of its scientific research, which sets forth each instructor's productiveness or non-productiveness in the clearest light[12]. The best professors are elected to great national and international academies of science; with now in Berlin the function of full professor in all the Prussian universities at once, with power to lecture in one or more on equal terms with any of the local professors. In Athens, the best professors are now being elected to its magnificent academy[13]. Expeditions, prizes, and honorary titles,

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[10] In 1868, M. Duruy, Minister of Education, addressed a report to the Emperor suggesting the institution which is now the culmination of the educational system of France, *L'Ecole Pratique des Hautes Etudes*. This report contained two decrees, one creating two classes of laboratories, those for general education and those for research, and the other creating the school itself. Both were signed by the Emperor July 31, 1868. The school was organized in four sections,—Mathematics, Physics and Chemistry, Natural History and Physiology, and History and Philology. Each of these has now its own rules of internal structure and function. Students of all lands are received for a probationary term of two or three months and then if approved they must contract to remain the full term of three years. Full admission is by act of the Minister, and is meant to be a definite consecration to the work. The best papers of members of the school are published in the *Bibliothèque* of the school. They may be sent to foreign universities, whence they must send three reports each year. They may be sent on scientific missions to distant parts of the world. The best of them are paid stipends, prizes, and are otherwise favored. Each of the four sections is under the control of a committee of patrons of five appointed by the Minister for three years, and these are under a special superior council. The *Ecole Pratique* is thus the heart of the university and the especial care of the Minister. It draws a line somewhat analogous to that between pass and honor men in English universities, selecting out those who are in earnest with their studies, in which they must be both able and advanced, and stimulating them by all practicable incitements to research and discovery. A fifth section in religious sciences was established in 1886 and is now nearly in full operation.

[11] So deeply have her expensive political, financial, and other errors injured France, and such became her realization of the need of trained statesmen, that some twenty years ago a private joint-stock company was formed to create and open under twelve directors this famous school. Five hundred shares at 500 francs each were issued, and the *Ecole Libre* was opened January 10, 1872. The apparent object of the school was to give the highest possible finish to a liberal education, but it was found that young Frenchmen were disposed to devote less and less time to study between the close of college and the beginning of business and professional life. Therefore seminaries, which study methods instead of presenting finished conclusions in lectures, were in-

troduced, and everything was shaped to the needs of the public service. The practical tendency of this work is shown by the fact that the great majority of graduates enter the higher civil service and that the great majority of successful candidates for certain classes of places come from this school. It has now a new building, and in the last announcement there were 29 professors. There is a competitive prize of 5,000 francs awarded every five years, besides other minor prizes. The library already contains more than 10,000 volumes and more than 100 special journals are accessible in the reading room. Instruction is given both by lecture and in conferences. The lectures are very formal, finished and polished. The conferences are very informal and conversational. The professors are as a rule practical administrators, or men of prominence in politics. Students enter for one or more full courses and may be examined for diplomas. The full course is two years, but may be extended to three.

The government, instead of being jealous of this free school which the least breath of partisanship would injure, now indirectly favors it. Exact and detailed accounts of the conditions and time and place and subjects of each state examination, which is a condition for every higher office, are printed in each annual register. Thus science and official careers are brought into the closest and most wholesome relation.

[12] The order requiring the publication of these chronicles by all the Prussian universities was issued March 9, 1887. The form of presentation is not prescribed, but is left free for each university. These publications give an admirable view of the activity of the institution. They show what and how much work is really done in laboratories and seminaries, and will be invaluable for the university historian of the future. In addition to all this they furnish a potent stimulus for the advancement of all university interests.

[13] The first and chief care of the Greeks as a free people in the convention of 1822, was to provide for public instruction, and a normal school was founded at Argos; central schools for mutual instruction in each province,

rank in learned societies, advancement from smaller to larger universities by merit; all these — some old, but most new — have greatly increased the incentive to the highest work.

Finally, universities themselves are now being compared and ranked. This policy has been either proposed or adopted in nearly all leading countries of Europe. The differentiation ranges from the

and many new schools in all parts and in the islands were established. "The hope of Greece," said the orators, "lies in the education of her children." An academy of savants was set up and Capodistrias, the chief patron of education, sent deputies to study the systems of other lands. A military school was established at Nauplie, an ecclesiastical seminary at Poros, and an agricultural school at Tirynthe. In 1830 the government was spending nearly $50,000 a year for education, and had much private assistance. The assassination of Capodistrias in 1831 broke up the new organization.

In 1837 the present university at Athens was founded. Many private legacies have greatly aided the work of the government, especially that of Sina, who erected the magnificent Academy at Athens, one of the most beautiful of all modern buildings, built of Pentelican marble, and costing nearly a million dollars. The *Arsakion* for girls, the *Barbakion* for boys, and the polytechnic school are all private gifts.

Greece is now divided into 13 departments, 59 districts, and 366 communes, under prefects, sub-prefects and mayors, respectively. Only the last are elected. All the officers must inspect schools. The Minister of education nominates all teachers. His bureau has three departments, primary, secondary and higher, and archeology. Secondary and higher instruction is given by the state. The communes always participate with the state in the control of the lower schools. In the 3,961 villages of Greece there are only 1,035 primary schools for boys, and 137 for girls. But there are 276 private schools. Although the entire population is 1,700,000, there are only about 80,000 in school. The total annual expense for primary schools is about $300,000.

Secondary education is represented by so-called three-class Hellenic schools, by the four-class gymnasia for which the former fit, and by special schools of various classes. All these schools are entirely free. In both the stataric and cursory courses of Greek authors a remarkable amount of classic Greek is read, but there is too great adherence to German methods for pupils who inherit the language. To learn living languages in these schools is held to be impossible. There are 199 of them, with nearly 12,000 pupils and 520 professors. There are also four ecclesiastical schools and one superior school. The university is on the German plan. The philosophic faculty has three sections, philosophy, natural science and mathematics. The archeological museum society and its journal show great activity. The ideal of the scores of benevolent patriots is the restoration of the prestige of ancient Greece on the lines of modern sciences, developing at the same time all the precious resources of the rich past. In Italy, France, Russia, England, Austria, Egypt and other European countries, Greek schools are found.

emphasis or even monopoly of one or two subjects locally favored to the restriction of the field of single institutions to certain limited subjects or groups, and even to the legal extermination of certain universities where the customs of faculty or students were deemed irredeemably bad. In Scotland a general university court has been proposed, but not yet established; in France a committee is now collecting material for a report on the international equivalence of degrees. Several new inter-university and international student associations, like most great medical and legal associations, are fast grading and comparing the efficiency of the same departments in different universities.

Now of all these new departures there are two watchwords and touchstones. The first is research. The interests and needs of research have been more and more dominant in determining the form of even university buildings. An eminent professor lately said — extravagantly, of course — that nothing would now contribute more to the advance of chemistry than cheap laboratories that could be totally rebuilt every ten years to meet the new problems of that magnificent science. Quite apart from the value of new discoveries to industry, not to speak of the new intellectual world that has been opened by whole-souled consecration to the work of investigation, is the educational value of the labor and attitude of research. It is this which cultivates the power of *effort*, which psychologists now agree is probably the highest and most educable part of man. It is the effort to secure this end that is transforming the methods of lower schools also. It is by training the self-activity of effort that the new education of action takes the place of the more passive methods of cram, and thus fits best for the life of the next few decades to see and act in which is the thrice-blessed privilege of the student of to-day. The most popular and impressive German book of the year is a voluminous argument that the present age of science is now to be succeeded by a new age of art, wherein the professor who knows shall give place to the artist who does, or produces.

The other watchword of these departures is specialization. When we reflect that modern science (meaning the great body of completely proven and logically well knit knowledge in all fields that is both certain and exact) is the greatest achievement of the race thus far, that it contains the greatest culture power, makes the best woven mental and cerebral tissue, that because universities are its peculiar organ they are the chief nurseries of talent and are charged with the highest interests of man, we cannot wonder that men are content to labor long and obscurely to bring one new stone to an edifice so magnificent. Since Comte and Darwin, and the doctrine of the conservation of energy and molecular physics have made the world one in a sense unknown before, so that every science must now be comparative, so that every great discovery is felt in all parts of the field of knowledge, the dangers of specialization have decreased and the necessity for focusing has become imperative. General culture is the best soil for any kind of culture to spring from, and power, though best applied at a small surface is best developed over a large one, but general culture is the symmetrical all-sided development of the individual. Strength lies in individualization. Its type is not the encyclopedist Diderot who would learn all trades, or Plato's Hippias, who would make his own clothes and shoes, cook his own food, etc., but rather Goethe, Schiller, the great philologists and philosophers in Germany before 1810, who never passed an examination. The products of a too prolonged general culture are among the saddest products of our contemporary institutions. A truly liberal education in the modern as distinct from the mediaeval sense is now professional specialization on the lines of natural gifts and individualization.

The committee on the new German *Anstalt* report that the establishment of weights and measures sufficiently accurate for modern needs requires profound experimental study in molecular physics, light, electricity, thermo-dynamics, and, indeed, every known property of matter. Such is the *omne tulit punctum* of nature's organic unity which gives a new religious consecration to science, teaching that the world is lawful to the core.

Again there are marked tendencies among our universities and other higher institutions to specialize and coördinate, as integration is said to go with differentiation. No man or institution leads in all departments of chemistry, or of physics, or of electricity, e. g. More and more each aims to lead in one part of the field and recognizes in other parts the same authority elsewhere. So in physics, the advanced student goes perhaps to Bonn for electricity, to Berlin if he wishes to specialize in thermo-dynamics, and so on. In several countries such differentiation among universities is expressly encouraged or enjoined by the state. Thus, while the disciplinary stages of teaching are done equally well at many centers, for the purposes of higher training the universities of Germany, Italy, Holland, — if we might not say Continental Europe, — are slowly becoming one great university in which the departments of each single university are selected by the best students with the same wholesome stimulus to each as our so-called " elective system " has given to rival departments in the same institution. The expense of advanced work and research per man is so vastly greater than that of instruction, that only coördination avoids the waste of duplication and the great danger of respectable and complacent mediocrity in the various domains of culture peculiar to democracies, which in their long historic struggles for existence against ignorance and its attendant evils need the whole strength of education — most of all the highest — for their leaders.

Progress along these lines to a higher plane is now an inevitable next step. The new cause of the University is now an inspiration to many for it is in the current of all good tendencies in higher education, and these seem now irresistible. The life of science in this country is to be more free, academic policy more independent, the instincts of discipline stronger. Those who can sustain the ardor of research are to be relieved of excessive teaching and examination and kept to their best work. Five thousand dollar professors are not to be kept doing five hundred dollar work. Equipments of books and apparatus are to be ampler, that no force be lost on inferior tools.

As business absorbs more and more of the talent and energy of the world, its considerations more and more prevading if not subordinating, whether for better or worse, not only the arts, the school, the press, but all departments of church and state, making peace and war, cities or deserts, so science is slowly pervading and profoundly modifying literature, philosophy, education, religion, and every domain of culture. Both at their best have dangers and are severe schools of integrity. The directness, simplicity, certainty, and absorption in work so characteristic of both, are setting new fashions in manners, and even in morals, and bringing man into closer contact with the world as it is. Both are binding the universe together into new unities and imposing a discipline ever severer for body and mind. When their work, purified of deceit and error, is finished, the period of history we now call modern will be rounded to completeness, culture will have abandoned much useless luggage, the chasm between instruction and education will be less disastrous, and all the highest and most sacred human ideals will not be lost or dimmed but will become nearer and more real.

In the fact that the best type of American business man now so often consecrates his fortune to the advancement of higher education, and is never content with what he esteems the second best, we see not only the normal, complete, if you please, post-graduate ethical maturity of an individual business life but also a type and promise of the yet greater things which wealth now seems likely to do for the highest education in our country. Institutions thus founded, and which give a new completeness to life in age which Cicero did not know, are thus a more typical and vital product of the national life at its best than are foundations made by State or Church, in which to train their servants. Endowments for higher education seem now to be the order of the day. We are certainly fast rising above the respectable and complacent mediocrity lately our curse in nearly every domain of culture. We must show that democracy can produce — as it must, or decline — the very highest type of men as leaders. We must have men whose minds have got into independent action, who are authorities and not echoes. The conclusions, drawn from perhaps the most comprehensive government report ever issued, and based on the study of over 20,000 foundations, were that of all the great popular charities, higher education has proven safest, wisest, and best, and that for two chief reasons — first, because the superior integrity and ability of the guardians who consented to administer such funds, the intelligence and grateful appreciation of those aided by them, and the strong public interest and resulting publicity — all three combined to hold them perpetually truest to the purpose and spirit of the founders; and secondly, because in improving higher education, all other good causes are most effectively aided. The church can in no other way be more fundamentally served than by providing a still better training for her ministers and missionaries. Charity for hospitals and almshouses is holy, Christlike work, but to provide a better training for physicians and economists, teaches the world to see and shun the causes of sickness and poverty. Sympathy must always tenderly help the feeblest and even the defective classes, but to help the strongest in the struggle for existence, is to help not them alone, but all others within their influence.

The remarkable contact of the marvelous new business life and energy of North Germany (which in both suddenness and vigor equals anything in this country), with staid and tranquil academic ways, has had some marked reverberations and given new direction and impetus to other studies where it is not directly felt. The great chemical industries, almost monopolized by Germany, depend on the work of professors, whose class-rooms and pockets they have filled. If the proximity of the patent office and factory to the university laboratory has narrowed and occasionally given a wrong direction to science, it has intensified it. What chemistry has done for dyeing, and is now ambitious to do in the way of making, artificially, certain drugs and even foods; the necessity of the spectroscope for the Bessemer process; sugar refining, wine and dye tests for the custom house and two forms of medical diagnosis; the necessity of long study of pure sciences for eminence in medicine, show us how these direct products of whole-souled devotion to unremunerative research have made these the "life-springs of all the arts of peace and war." Physicians, technologists, clergymen, lawyers, or pedagogues who slight the basal sciences of their profession and hurry to the practical parts, are like those young men who grow prematurely old and sterile.

The university should be a laboratory of the highest possible human development. As another says, "The more and better books, apparatus, collection, and teachers, and the fewer but more promising the students, the better the work." It must stand above and fructify the practical spirit, or the latter will languish for the want of science to apply. The former must make discoveries or the latter cannot make invention. All questions, if profoundly studied, now become educational. Life is the education of protoplasm, and the hunger for more and larger life is the immortal instinct of talent struggling towards the full maturity and leadership which is its right.

If I have spoken too largely of Europe it is because it is not sufficiently known in this country what remarkable advances have been made since 1870, when the German victory showed what in two generations a national policy making educational control could do for a country, a date which in view of the rapid progress in every European land save Spain and Turkey alone, might almost be called the anno domini of educational history. Marked as has been our own advance, no part of our system suffers by comparison with the best in Europe, so much as the highest. Improvable as are our lower and intermediate grades, our greatest shortcomings are at the top. The apex of our system is in Europe where two hundred of our best graduates go each year. Whether measured on the scale of scientific productivity, or of expenditure of money, or of professor's time per student, as I am showing elsewhere in detail, we are yet far behind, are too negligent and wasteful of talent; as a distinguished foreigner has lately said, all ganglia and no cerebrum, with no one to look after the interests of higher education as a whole.

But, though we yet lack the best, we have no cause to be discouraged. Within very recent years great advancement has been made, and the prospects for greatly increased wealth, the advancement of science, the development of the best talent to fullest maturity and the due differentiation and needful coördination of work among our higher institutions was never better. The university problem in all its possible complication is upon us. Vast and unprecedented as are the responsibilities which by our method rest in this critical time upon a few leaders, I believe without a shadow of doubt or fear that, with them or against them, the American system will yet be made to represent the highest educational needs of the time and of the country.

MODERN LANGUAGES AT THE MASSACHUSETTS TEACHERS' ASSOCIATION.

We give below, a brief résumé of Mr. Grandgent's paper on *The Teaching of French and German in Our Public High Schools*, read before the high school section of the Massachusetts Teachers' Association, and of the interesting discussion that followed it. Mr. Grandgent's paper we understand is to appear in full in *School and College*.

Let us take it for granted that a foreign language occupies, in the average high school course, some three hours a week for three years. We cannot do everything in this time. My intention is to examine briefly the five chief branches of modern language study, with a view to deciding which we can most profitably pursue. The five topics are as follows: Speaking, Writing, Grammar, Translation, Reading.

The ability to use a language for the purpose of communicating ideas requires the thorough training of the vocal organs, the memory, the reasoning powers, the will. Hearing others speak will not do; we must speak ourselves. Given a class of twenty-five pupils, who spend in conversation the entire fifty minutes of the three recitation periods, per week; given also, for the sake of argument, an instructor who talks only half the time, what is the result? Each pupil may speak for three minutes a week, or two hours a year, or a quarter of a day during his entire high school course. When we reflect that it takes us ten or fifteen years of daily practice to master our native tongue, we can perhaps estimate the amount of skill which is to be acquired in six hours practice, scattered over a term of three years.

If, however, so-called "conversation" cannot be regarded in our teaching as an end in itself, it is certainly a valuable auxiliary. There are four reasons why we should cultivate it: first, the public demands it; second, students do not appreciate what they read unless they know how it sounds; third, these exercises interest the pupils; and fourth, they stimulate the teacher to greater mental activity. I would therefore advise those teachers who have a practical command of the language they teach, to use it as much as possible with their classes, but not to waste time on it. Speak to the pupils in the foreign tongue whenever practicable, and encourage them to speak. Give great care to pronunciation, particularly at first. Begin with a few simple sentences containing no new words, and decrease month by month the amount of English spoken. I would advise teachers who cannot speak German or French to learn to do so as quickly as possible, but not, meanwhile, to experiment on the class.

As to writing, it at first seems as if we could by this means train the reasoning faculties of our pupils, while fixing in their minds the important facts of the language. But we cannot make writing the chief end of our teaching unless we can teach pupils to write well. Now before students can write properly, they must have collected the materials; they must have read much in the foreign language, and learned thoroughly the necessary points of grammar. The former of these requirements is in my opinion the more important of the two. Our talking and writing of a foreign tongue are almost wholly a matter of imitation. We must meet with a word many times and examine it from many points of view before we feel that we are on speaking terms with it. If we spent all our three years on translation and grammar, our best pupils would then be in condition to begin serious work in composition. Writing must therefore be considered as a side issue.

It at first seems as if grammar, with enough reading and writing for illustration, would furnish a good instrument for training the intelligence, and as if it ought to be mastered by diligent and fairly able pupils in three years. But it is alas! shown by experience, that our pupils when obliged to study grammar, are neither diligent nor fairly able. However pleasing grammar may appear to the philologist, to the school boy it is merely an intolerably dry collection of paradigms, rules and exceptions; and the school boy cannot do his best work unless he is interested. Yet we must have some grammar, and the one way out of the dilemma is to teach only the essentials, administering this necessary amount in small and well-graded doses, and emphasizing its utility and relieving its dullness by means of interesting composition work, and agreeable reading matter.

Translation and reading, as I use the terms, are not quite the same thing. Of the former the chief objects are mental discipline and training in English; of the latter, general culture, to be obtained through the intelligent perusal of the greatest possible number of good foreign books. Yet the two cannot be separated; reading must begin by translation, and thoughtful translation of literary master-pieces cannot fail to refine the taste. In either case we must select works that are excellent in themselves and which can be readily appreciated by our pupils; we should study with the same care the differences in idiom in the two languages; and whatever our aim, we ought never to be satisfied with inaccurate or unidiomatic English versions. It is, in fact, rather two ideals that we have to distinguish; if we direct all our efforts to the development of the reason, we shall have a course of carefully corrected translation, a maximum of grammar and composition and very little speaking; if on the other hand, we aim at the broadening of the mind, and the cultivation of the taste, we shall have more translation and conversation with less writing and grammar; and we shall strive to train our pupils to absorb directly through the medium of the foreign language without the interposition of English.

No complete course can wholly neglect either of these objects, yet if lack of time compels us to choose, the following considerations seem to me of weight. In our public schools most of the work seems calculated to fit young persons rather to meet the exigencies of life than to enjoy its good things. When foreigners criticise us Americans, they say that we are intelligent, quick, inventive, but lacking in refinement and in artistic taste; and I think there is much truth in this judgment. Now refinement and taste are necssary factors of civilization and how can they be more readily developed than by the study of literature? We have already a somewhat meagre course in reading English; but this could never be half so effective in overthrowing prejudices, suggesting ideas, opening new vistas, and forming correct standards, as is the intercourse with great minds of other countries. I am therefore inclined to say that a French or German course, does not fulfill its true mission until it affords pupils at least an introduction to the best literature of the language they are learning.

Dr. Van Daell, by appointment, opened the discussion. He said:

Mr. Grandgent has admirably defined what should be the aim of modern language teaching in the preparatory schools. In stating his case, he assumed that three years are given to the modern languages in the schools, and he showed us to what scope it is best to limit our efforts in such a course. But it is the unfortunate fact that in many schools of Massachusetts and of other states the course is limited to one year. To study a modern language for one year only, is, in my opinion, a perfect waste of time. In a course of that length nothing can be done; pupils can neither learn the grammar of a language nor gain an understanding of its literature. With regard to the modern languages such schools fail to do their duty by any of their pupils, for they certainly fail to do anything for that large class or number whose studies do not go beyond the secondary schools, and they are equally remiss in their duty to the minority who go to college. The only aim of such language work in the case of the latter class of students is barely to meet the requirements of the higher institutions. Now this is a great pity. It is degrading to teacher and pupils alike to do as little as they possibly can, only so much work as is absolutely necessary to penetrate to the higher institutions. It is better to do nothing at all, for such work establishes in the pupils' minds low ideals which prevent them from ever attaining excellence. Pupils who come to college badly prepared of course go into the same classes with those who have had good training, and they never make up what they have lost. They are condemned throughout their college course to a necessary and unavoidable inferiority.

At the recent meeting at Cambridge, many of the speakers advocated what they called a system of "dipping down." It seemed to them wise to "dip down" into the grammar schools to reach the pupils at the most favorable period of life for the study of modern languages. But I have a suggestion as to something which may be done under our present system: namely, that it would be much to the gain of the after study of French and German if pupils studied a little more of the English language. The task of the modern language teacher in the high schools, in the institute, or even, (judging from their reports out at Cambridge,) in Harvard College, would be materially lightened if, when the students came to them, they knew thoroughly well the elements of the grammar of the English language.

This lack in the modern language preparation is sometimes the fault of the pupils, who waste a great deal of time; but it is oftener due to the imperfect preparation of the teachers. And where lies the blame of this defective preparation? In the fault and negligence of the teachers? I do not say that. It is often due to that sad state of affairs which forbids so many teachers from going beyond the high school course in their preparation, which is then entirely inadequate. But even when they go to college the state of affairs is often not much bettered, for their opportunities there are very small. The colleges where really advanced work in modern languages is given may be counted on the fingers. I was sorry last year to see the incipient higher State Normal School nipped in the bud. The need is very great for the advanced training of teachers. No colleges have concerned themselves in this all-important work of preparing teachers, yet there are few directions in which their efforts would bear more fruitful results.

Furthermore, the competency of teachers should be decided by the State. The matter of selecting teachers is much complicated, because there is no competent higher authority. It is naturally a very difficult thing to select a teacher of modern languages. A large number of American boards of education are not capable of making that selection. In this connection I recall the story of the attempt to select a French teacher in a certain large city. The board wished to make a very careful choice, so they said: "We will ask the French consul to help us." Now this was a very natural thing to do, and that French consul was a very excellent man; but he unfortunately happened to be an Alsatian. Alsatian French is very different from other French, and an Alsatian cannot understand or be understood by other Frenchmen. The applicant for the position was in this case a pure Parisian, — a true Parisian for once!—with a most perfect accent; but when the Alsatian consul asked him some questions, the Parisian, not understanding him, was unable to reply, and was accordingly rejected.

As to what Mr. Grandgent said about conversation, I would say in the words of Faust to Marguerite, "I substantially agree with what the preacher has said, but I would put it a little differently." Conversation teaching is out of place in the high school unless it is taught in the proper way, with suitable subjects. Talk about the weather and the usual "how do you do" amounts to nothing. But I know that in the schools of Boston, under the direction of Mr. Grandgent himself, conversation is made a fruitful part of the modern language work, but always with proper subjects, — perhaps upon the topic of the reading lesson. It is thus made a live work, calling the pupil's whole activity into its service. Conversation is a quicker and more satisfactory form of exercise than written themes, while it serves the same ends. It keeps the pupils constantly on the alert, teaches them to be ready with their store of knowledge, and demands the activity of all the mental powers. Moreover the results of conversation work prepare the way for further study of language, because it is the best basis for the study of phonetics. Phonetics is an integral part of advanced work, without which it is impossible to proceed far. It is important that this subject be begun early by giving great care to pronunciation. Students who have had no early training in pronunciation, are debarred from pursuing the higher work in phonetics. And I believe that the courses in our schools should be so arranged as not to exclude the development of the highest possibilities of any student.

It was then suggested by another speaker that as there is so little grammar in the English language, it is not of much use to the understanding of other languages. The great difficulties in foreign languages lie in matters like the dative and accusative cases, to which there is nothing in our own language which can serve as a basis for comparison. If, however, a foreign language could be put into the grammar schools, that study would lead to better results in English.

To this Dr. Van Daell replied: — It it was not the more difficult points like the dative case to which I referred when I said that pupils were deficient in their English grammar. I meant that students do not understand the simple relations of subject, verb, and object. I have found pupils who could not give the future of the verb to be, or name the subject of an ordinary sentence. The teaching of matters like these should not be left to the university.

Mr. Collar was the next speaker, saying: — What most amazes me is the levity with which the American people take up the study of a modern foreign language. They seem to think it no subject for serious effort, a thing any one can learn with ease. Such study is very differently regarded abroad. In Germany a foreign language is studied for six hours a week for years. What are we going to do? Can anything worth while be done in our brief courses? If it is worth while to teach or study any language or any subject at all, it is worth while to do it well. If the result of giving proper time to thorough work in French or German is to cut out certain other subjects from the courses of our schools, I should regard even that result as highly desirable.

It was here remarked by another speaker that a text-book in English grammar is yet to be seen which makes a proper distinction between pronouns and adjectives, and that this is the cause of much of pupils' trouble with German grammar, which treats as adjectives certain words which are called pronouns in English. There is need of a really good English grammar.

At the request of the Chairman, Professor Fay spoke: — In Tufts College, French and German are put on the same plane with Latin and Greek. A student may present Latin and French or German for admission, deferring his decision with regard to Greek until after he has entered. He may then pursue Greek throughout his college course and reach as advanced a position in that language as is obtained by the students who present it for admission.

There are one or two points in Mr. Grandgent's paper to which I will refer. First: — With regard to speaking German, we have drawn, from time-statistics of the very kind which Mr. Grandgent presented, the conclusion that so far as anything worthy the name is concerned, learning to speak German is out of the question. I should like to have the testimony of the French teachers in the Montreal schools on this point. French is there one of the two languages of the country, and yet Montreal teachers were indignant at the severity of the requirements proposed by the Modern Language Association in the meeting at Cambridge.

Second: — In connection with what has been said of grammar, I want to protest against that term being applied as it constantly is. The grammar should not be held in view as an end in teaching, and I believe that it is not, though it would seem so from the manner in which the word is employed. We do not, we should not, study a modern language for the sake of its grammar, though the grammar work is a very useful adjunct. English grammar helps in the study of other languages in furnishing opportunities for comparison, and may be made to reflect back to the student's mind the forms and word relations of the foreign tongue. To attempt to get at any language except through an avenue of approach is a waste of energy. It reminds one of a cow trying to bite into a pumpkin. The study of the grammar of a language is the study of its history, and like all history, as has been said here to-day, it is a study of facts. A systematic knowledge of the facts of a language is a means to an end, a necessary means to the end we aim to reach. Yet grammar is in itself an absorbingly interesting study. I deprecate the common talk of grammar as a kill-joy in language work. This wide-spread idea of it I believe is due to the natural method men. I do not wish to put myself on record as opposed to the natural method. I believe in it in its proper place, as an adjunct. But it is to be condemned in so far as it belittles the study of the great facts of a language as the true avenue of approach. I have recently seen a book called "French by Reading," which I believe to be a good thing. It presents the facts of a language in connection with extracts for reading, thus making evident their relation to the living whole, instead of giving the impression that grammar is an arbitrary set of forms to which language must be made to conform.

Mr. Grandgent said: — In reply to Mr. Collar's question whether anything of real value can be accomplished in languages in a course of three hours a week for three years, I would say, yes. If good work is done pupils ought in that time to be enabled to read French and German by themselves for their own pleasure. If they do not accomplish so much, the course should be extended, or discontinued.

Mr. Thurber spoke in advocacy of the early study of English grammar as the best foundation for subsequent language work. He who has been trained in the study of his own language can attack a foreign one without depending on teachers. The outcry against the study of English grammar is a curious educational whimsey of the last few years. All teachers of English, of French or German, of Latin or Greek, in secondary schools have felt the enfeebling effects of the abandonment of grammar-drill in the grammar schools.

Mr. Kirmayer, of Bridgewater, wished to discuss briefly a point not brought out in the paper. He said: — I do not agree with Mr. Grandgent, if, as I understand, he thinks that conversation work,— speaking, — is a waste of time. One thing at least the pupil can do, he can learn to understand the spoken language. He can learn to do that in a year, though he cannot learn to speak it in that time, or even in a much longer one. The essential words of ordinary conversation are not more than five hundred. These will readily be learned by ear, and a vocabulary of nouns and verbs is all that remains to be acquired. I do not allow my pupils to try to speak at first. For the first two weeks I read to them, from the grammar, what they are going to study. I pronounce slowly, and they listen with closed books. At the end of two weeks I let them try it, and it is there. They have the French *u* or the German umlaut. I also make them always give the article with the noun, so that they learn the gender by ear, unconsciously. No one can learn the German gender, even in five years. No one knows the German gender. Who is going to run through long lists of exceptions to find in which class a noun belongs? The only way it can be learned is unconsciously, by always using the article. The most useful thing which we can give our pupils is the ability to understand the language when spoken. All that is necessary in travelling in a foreign country is to know what is said. Then your *yes* or *no* of reply is enough. Our pupils can quickly learn to understand a foreign language when spoken, and to do that is better than to speak it badly.

THE INFLUENCE OF THE TEACHER'S MANNERS.[*]

Fellow teachers, I am glad to be given this opportunity to speak to you upon what I feel to be a vital topic, the influence of fine manners in the school-room. I am convinced that we teachers do not lay enough stress upon the importance of manners. I am enough of a heretic to agree with a certain superintendent of schools, who in speaking to me of what he required in his teachers said, "First of all I ask that my teachers shall be men and women of high, strong, noble character, second that they shall have fine manners, *third* learning, and *fourth*, professional training. I know this is heresy in this presence!

If we teachers are to hold our pupils, especially the boys, in school, we must have something that will draw them more strongly than business and pleasure outside can. Sound learning and business ability will not do this. Fine, high character, and sweet and gracious manners can. And in speaking of the teacher's manners, I of course refer to her manners everywhere, — on the street, at home, at church, as well as in the school-room. In the end, the teacher's manners show us all the rest. Manners are the indices of other qualifications, and reveal a teacher's culture and training and all that goes to make up character.

We all know men and women who have been our teachers, high-minded, true characters, who longed to teach us well, to train us to be what they would have us, whose overwrought, eager, earnest, generous anxiety made them so nervous that all their efforts failed; they repelled the pupils whom they wished to attract, and defeated the very object nearest their hearts. I remember a teacher I once had — a very learned teacher, but who could not control her nervous impatience; she would make the little girls speechless from fright when she stood before her arithmetic class and cried "Now!" watch in hand. My father decided that his dear friend was not fit to teach his nervous little daughter, and so I had to have another teacher, one who had a sweeter voice, but who was not nearly so learned.

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[*] Part of a talk given by Mrs. Alice Freeman Palmer before the Massachusetts Teachers' Association, Saturday morning, November 28, 1891, at the College of Liberal Arts, Boston University.

Surely if there is any place in the commonwealth where all that is fine, gracious, and womanly should be united in effort with all that is strong, nobly, and manly it is in our public schools. It always makes me sorry when I hear that parents who are able, send their children to private schools because they receive there better training in manners than they do at the public schools. Most of the little children who come to our public schools have no opportunities to learn gentle, gracious ways at home; they come from homes where there is hard work, and crowding, and very little culture. These little children ought to have the best possible chance at school. It is said across the water that the American public school is largely responsible for the American voice. When I hear the little voices shouting out their lessons to the anxious-voiced, but loving teacher, then I long to emphasize the power of a sweet, strong voice. We cannot all possess this qualification, because our grandfathers did n't give it to us; but we can all do our best to have our voices clear and sweet, and to bring these gentler, sweeter qualities to the surface.

The more I go about among the schools, the more I am impressed with the fact that there are thousands of boys and girls whose highest ideal is their teacher. Teachers may distinctly influence the manners of our time. The teacher is the living epistle, known and read of all her children. How quickly the children recognize the bashful teacher, who has to "bluff" a little to hide her shyness; and how keenly they are affected by the one who has grown so tired in the service that he forgets how his sharp words sound to little hearts.

Besides this matter of the voice, I want to say that teachers should be generous in speech and behavior. We shall not loose our power if we are less rigid and cultivate more sweetness. I know a little boy in Cambridge who used to be a very bad little boy, who is now good, because he says his teacher is "such a lady that someway he can't be bad." Some teachers are too pedagogic in their language, — and yet it is not fair to call it pedagogic. We all know teachers in whose presence Shakespeare and Milton would stand aghast; whose pupils must always say "I cannot," instead of "I can't." Let teachers be less finical and critical, and more lenient, even over an occasional slang phrase.

The pupils must feel that in addition to all the teacher knows, she is instinct with love and kindness for them. The darker the day and the more restless the pupils the more she must exercise a gracious tact and let the light of sympathy shine in her eyes, even when the sternness of discipline is required. The teacher must so carry herself that every little girl on the street will feel when she passes her teacher that she passes an uplifting presence, so that the highest ideal of the boys and girls will be, that when they are men and women they may be "just like that."

If I were hiring a teacher to-day for children who were dear to me, for whom I wanted to do the very best I could, I would choose, — not to teach Latin a man who knew nothing about it, — I hope I should not do that, — but first of all I would choose a man who was a gentleman in heart, life, manners, instincts, dress, habits. He must be fine and high in all his thoughts and imaginations of his pupils.

AN EXAMINATION IN ENGLISH.

The following examination was given to the third-year classes of the Boston high schools, Dec. 18, 1891. It is an examination in Milton, and covers two books of Paradise Lost, Comus, Lycidas, L'Allegro, and Il Penseroso:

PART I.

From 9.15 to 11 A.M. Recess from 11 to 11.30 A.M.

Take any six of the seven following questions:

1. (*a*) What was Milton's purpose in writing *Comus?* (*b*) Why is the play called a "Mask"?

2. Where does the action of the story of *Paradise Lost* begin, and how does it progress to the end of Book II.?

3. Indicate the metre of the following lines, and state the effect of the versification upon the ear:

> "When the merry bells ring round,
> And the jocund rebecks sound
> To many a youth and many a maid
> Dancing in the chequer'd shade."

4. From the five following quotations select three, and state in what connection in Milton each is found:

(*a*) "What though the field be lost?
All is not lost."

(*b*) "Though of their names in Heav'nly records now
Be no memorial, blotted out and ras'd
By their rebellion from the books of life."

(*c*) "And fierce with grasped arms
Clash'd on their sounding shields the din of war,
Hurling defiance toward the vault of Heav'n."

(*d*) "But all was false and hollow; though his tongue
Dropt manna, and could make the worse appear
The better reason."

(*e*) "But now at last the sacred influence
Of light appears."

5. Explain the allusion in any three of the five following passages:

(*a*) "They left me then, when the gray-hooded Ev'n,
Like a sad votarist in palmer's weed,
Rose from the hindmost wheels of Phœbus' wain."

(*b*) "And thou shalt be our star of Arcady
Or Tyrian Cynosure."

(*c*) "And ever against eating cares,
Lap me in soft Lydian airs."

(*d*) "Where the great vision of the guarded mount
Looks toward Namancos, and Bayona's hold."

(*e*) "Nor did Israel scape
Th' infection when their borrow'd gold compos'd
The calf in Oreb."

6. Complete the comparison, and comment upon the words in italics in the following:

"As when far off at sea a fleet descri'd
Hangs in the clouds,

7. On a recent occasion, a speaker referred to a gentleman who would follow him, as "pointing with a new emphasis the lovely thought of Milton:

'How charming is divine philosophy!
Not harsh, and crabbed as dull fools suppose,
But musical as is Apollo's lute,
And a perpetual feast of nectar'd sweets,
Where no crude surfeit reigns.'"

(*a*) Where in Milton is this passage found? (*b*) What should be the characteristics of a speaker meriting such an introduction?

PART II.

From 11.30 A.M. to 12.45 P.M.

1. Express in your own words the thoughts embodied in the following extract from Milton. It is presumed to be a passage you are not familiar with:

> "Now when as sacred light began to dawn
> In Eden on the humid flow'rs, that breath'd
> Their morning incense, when all things that breathe
> From th' earth's great altar send up silent praise
> To the Creator, and his nostrils fill
> With grateful smell, forth came the human pair,
> And join'd their vocal worship to the choir
> Of creatures wanting voice: that done, partake
> The season, prime for sweetest scents and airs;
> Then commune how that day they best may ply
> Their growing work."

2. Expressing your thoughts clearly and concisely, write in good form a short essay upon either of the following subjects:

(*a*) Belial. [His appearance; character; and argument in the "great consult."]

(*b*) The Lady in the Palace of Comus. [Her enchantment and deliverance.]

Question 1 (*a*) is ambiguous. It may be understood as calling for a setting forth of the circumstances in Milton's life that constituted the occasion of his composition of Comus, or it may be conceived as asking for an interpretation of the poem itself. "Milton's purpurpose in writing" is an unhappy phrase for either of these intentions. The uncertainty of the question was perceived by the pupils, some of whom answered it one way, and some the other, while not a few, to make sure of hitting the mark, answered it both ways.

Question 2 calls for two statements, one a brief sentence, and the other altogether vague in its possibilities of expansion. The former half of the question is good, the latter quite otherwise. As a matter of fact, pupils varied between the extremes of a hundred words and a thousand in their answers to this question. "How does the action of the story of Paradise Lost progress to the end of Book II" is a question strangely lacking in definiteness. Evidently some kind of abstract was intended. But in making an abstract everything depends on assigned limits. Here no limits are suggested.

Question 3 is good if the examiner's mind is *in utrumque paratus*

— equally ready to see verses, 1, 2 and 3 scanned as iambics or as trochees. Whether these lines are scanned as four-foot iambics lacking the initial light syllable (anacrusis), or as catalectic four-foot trochaics, is quite immaterial. No fault can be found with the question unless the expression "Indicate the metre" may possibly be held to imply that the metre is a distinctly and conclusively indicable thing.

Questions 4, 5 and 6 are excellent, or would be, if the number of words to be used in the answers was restricted to some suitable limit.

Questions 7 (*a*) and 7 (*b*) are introduced with a preamble which is a masterpiece of curious infelicity. Coming to this question, the young examinee is forced to stop and debate with himself what relevancy to the passage from Comus is borne by "a recent occasion," on which "a speaker referred to a gentleman who would follow him." The situation requires a preliminary clearing up in order to settle just what the examiner would be driving at. The word "occasion" seems to be used as if in itself sufficiently connoting a meeting at which speakers addressed an audience. Hardly another word in the language, except *thing*, is so vague and indefinite in meaning as "occasion." The following clause, — "a speaker referred to a gentleman who would follow him," — does not distinctly and unmistakably furnish the needed connotation. Before one can finally conclude what the "occasion" was, what kind of "speaker" is intended, what this "speaker" did when he "referred to a gentleman," and what this gentleman is described as purposing to do in the expression, "would follow," — before one can settle in his mind all these nebulous matters and come to the passage from Milton, one must pass through a period of perplexity wholly extraneous to the subject of the examination. The expressions "occasion," "speaker," "referred to," "would follow," are all used indistinctly, and fail to illumine each other with that sufficient and instantaneous light that a writer must contrive to throw upon the elements of his sentences, if his style is to be intelligible and impressive. That this criticism on this unhappy preamble is not ill-directed the result proved. Not a few pupils were befogged by the manner of the question, though its point was good and the correct answer far from difficult.

The questions of Part II are good. Were we to comment on the word "concisely," in the directions to question 2, we should say that, for young pupils, it would have been well to illustrate the degree of conciseness desired by indicating the limits within which they should expatiate. High school pupils, accustomed to write off-hand on the numerous subjects of their studies, are apt to indulge in easy verbiage. There is really no end to the possible writing about Belial or the Lady. Good, careful, restrained writing, bearing the marks of infinite pains-taking, is what the examination should encourage.

SCOTT'S EDITION OF LEWES'S PRINCIPLES OF SUCCESS IN LITERATURE.[*]

ROLAND S. KEYSER.

It was a happy thought to reprint this little treatise. It consists of a series of essays on the principles which underlie excellence of literary composition that were contributed to the earliest number of the "Fortnightly Review." Mr. Lewes was the first editor of that magazine, — a periodical which introduced the practice of signed contributions and freedom of thought among contributors — and a part of his purpose, no doubt, was to show that the new review had set up a high standard of literary excellence. He says that his words are not addressed to the class of feeble writers, who would continue to write and to write feebly whether they found that they had any of the endowments that give real success or not, but to the able and aspiring, whom he hoped to help, not by showing them how to write, but by pointing out the principles under which genuine success in writing is obtained. His work is not, therefore, in any sense an elementary treatise on rhetoric. It is rather a supplement to a rhetoric, standing on the border ground between rhetoric and literature. It belongs to rhetoric in that it points out the laws which the writer must observe; and it belongs to literature in that it shows clearly the principles by which literary work must be judged. No better introduction to the study of literary criticism can be found than is here contained in the space of a hundred and fifty pages. It is hardly adapted to the ordinary rhetoric classes of a secondary school. It is too solid and thoughtful and deals too much with the fundamental laws of composition for minds which must be mainly concerned with the principles of punctuation, paragraphing, and the construction and arrangement of sentences. But the teacher should see that it gets into the hands of every pupil who develops an ambition to write for publication. It will, no doubt, discourage callow striplings who think that success in writing is something easily won, by showing them how great are the qualifications for a writer of real literature; but it will be of no small service to those who have the spark of true life in them by helping them to clear conceptions of what success requires. There is nothing of the text-book about it. It was written for those who think and who can appreciate thoughtful writing. It must be studied and pondered over, and the longer it is studied the more valuable it will seem. It is a book which every teacher of rhetoric and composition should own and thoroughly master. In practice, he must work largely with principles which have been diluted into special aphorisms and directions and must keep close to concrete illustrations and particular instances, but he ought not to forget the fundamental laws upon which these rest. He cannot find them anywhere else so well and clearly stated in such a brief compass. The book is full of usable suggestions for the teacher. They are not worked out into form for class use; but the good teacher prefers suggestion rather than a prescribed method, because he wants his method to be his own, and he knows that what comes fresh from the mint of his own mind is much more effective.

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[*] *The Principles of Success in Literature*, by George Henry Lewes, edited with Introduction and Notes by Fred. N. Scott, Ph. D., Assistant Professor of Rhetoric in the University of Michigan. Boston: Allyn & Bacon.

The most remarkable characteristic of the work is its firm grasp of the subject. You feel that the author is not attempting to restate in his own language a set of generally accepted conclusions, but that he has gone over the subject anew, has looked at it from his own standpoint, and has cast his conclusions into a consistent system of his own. The freshness and vigor of his treatment make the work in an unusual degree stimulating. It is as much more valuable than Herbert Spencer's "Philosophy of Style" as that famous essay is above a common rhetoric. It is plain that Lewes has furnished about all that is really valuable in some late works upon rhetoric and composition; and there is yet a chance for some good work to be done in beating out his ideas and giving them concrete illustration. He groups the laws of literature under three heads, founded on our three-fold nature — intellectual, moral, and æsthetic. The intellectual form is the Principle of Vision; the moral form is the Principle of Sincerity; and the æsthetic form is the Principle of Beauty. His discussion of these principles will give the student no little insight into the causes of abiding literary fame. The Principle of Beauty comprehends the laws of style, which he considers under five heads: The Law of Economy, of Simplicity, of Sequence, of Climax, and of Variety. The careful way in which he guards the application of these laws may be seen from a brief extract on the subject of economy. "Economy, although a primal law, is not the only law of style. It is subject to various limitations from the pressure of other laws; and thus the removal of a trifling superfluity will not be justified by a wise economy if that loss entails a dissonance, or prevents a climax, or robs the expression of its ease and variety. Economy is rejection of what is superfluous; it is not miserliness. A liberal expenditure is often the best economy, and is always so when dictated by a generous impulse, not by a prodigal carelessness or ostentatious vanity."

Professor Scott has performed the work of editor modestly and well. He furnishes an appreciative introduction and gives a sketch of the life of Lewes, which, however, is too brief to do full justice to the literary activity of that wonderfully versatile man. The work would have been easy to annotate, and offers an editor abundant opportunities to display his learning; but Professor Scott has wisely concluded that it is the best compliment to the student to allow him to study and understand the author directly. His notes are few, but they are all valuable and are felt by the reader to be a help and not an impertinence. The mechanical execution of the work is excellent; the only criticism to be passed upon it is that the book is bound in paper covers. It is so valuable and so different from the traditional text-book that it ought to be a part of the permanent library of any one who is able to read and understand it. No college student in rhetoric should be allowed to leave the book unread. No teacher in a secondary school, and, indeed, no thoughtful lover of literature, can afford to be without it.

NOTES.

Six years ago, in the opening number of The Academy, we chronicled the death of Fred Norman Wright, one of the best and ablest of the New York principals. News has just reached us of the death of Mr. Wright's father, Norman Freeman Wright, at the ripe age of seventy-six. Mr. Wright and his twin brother, Dr. T. K. Wright, of Elbridge, have long been familiar figures to the teachers of New York State, the former having begun his teaching there fifty-two years ago at Red Creek Seminary. Since that time, with the exception of a brief interval, during which he taught in New Hampshire, he had been engaged in active service in the Empire State.

Of Mr. Wright's technical skill as a teacher we have no knowledge, never having been so fortunate as to see him in the actual work of the school. Of his qualities of mind and heart, however, of the sturdy independence, uprightness and integrity, which characterized not only him, but also his brother at Elbridge, we have had abundant knowledge, and we wish to speak of it with no meagre or halting praise. We have never been one to underestimate technical skill in teaching or professional training for teachers. But after all the personality of the teacher is of more value than any technical skill, either natural or acquired. It is more important that a boy should see before him every day an upright, fearless, manly man, with earnest convictions and the courage to stand by them, than to receive instruction ever so nicely adjusted to his individual wants and abilities, or to attend day by day a perfectly organized and well conducted school. The Wright brothers were, the survivor, we are happy to say, still is, the type of man that we like to see our own boys come into daily contact with. It seems to us sometimes that the particular conditions under which teachers work are not altogether favorable to the development of manly independence, strong personality, and high moral tone. The demands of unreasoning parents and the flattery of foolish ones; the almost unavoidable subjection to unintelligent trustees or ignorant politicians, and the means that are often necessary to obtain or to retain a position, are all unfavorable to the best growth. That all these adverse influences have so little effect as they do, that teachers are as high-minded as they are under the circumstances, is doubtless largely due to the fact that their minds, through books and reading, are constantly under the influence of high ideals, and that they themselves are with more or less earnestness trying to impress those ideals on the pupils in their charge. Still we think that any man who has come much into contact with teachers will say that they are less independent and have as a rule weaker personality than men of the same intelligence who are not teachers. For this reason we always think with peculiar satisfaction of such teachers as are independent and outspoken, without being cranky or quarrelsome, prompt in the payment of all business obligations and social dues, masterful without harshness, and modest without obsequiousness. Such was the son who died six years ago; such was the father who has just died. To know such men is a support and an inspiration in one's daily work.

By all odds the most important recent contribution to educational thought has been President Eliot's lectures before the Lowell Institute during the past month. We wish we could also speak of them as contributions to educational literature, but we are informed that they are not to be published, at least for the present. President Eliot is always an attractive speaker, forceful, stimulating and aggressive. He never speaks without commanding attention and provoking thought. His positions are usually advanced ones, and he walks with firm tread where many hesitate even to venture a timid glance. In these six lectures on educational changes and tendencies, he has shown a knowledge of the past and an insight into the future of education, both in its general drift and in its more subtle tendencies, which we think are surpassed by no writer, either in this country or in Europe. The preparing of such a course of highly technical, and at the same time broadly generalized, lectures, on so difficult a theme, in the midst of the daily duties of his administrative work, shows marvellous facility. Moreover, he evidently carried his audience — no ordinary one, by the way — with him to a remarkable degree. However startled one may be by some new proposition, or by his statement of some unfamiliar fact, a serious consideration of the matter in hand almost always brings the listener to a point of substantial agreement.

In one particular, however, our own observation has not led us to the same generalizations which President Eliot has reached; and that is the question of the Michigan system of college admission by certificate. Of the unfortunate workings of admission by certificate in general there is little danger of too strong a statement. The Michigan system, however, rightly carried out, seems to us more nearly perfect than any other. That it has not always been ideally carried out, we should be willing to admit, and yet we should not hesitate to affirm that, all things considered, it has in the past been open to less criticism and to fewer objections than the examination system as conducted at any college in the country.

We think President Eliot fails to take into consideration the reflex influence of the system upon the schools. Of course it can easily be said that the primary object of a university is not to exert an influence, reflex or otherwise, on the lower schools. Still we think that all our best university men, and we know this is eminently true of President Eliot himself, are scarcely less anxious for the good of the lower schools than they are for the good of the institutions with which they are more directly connected. Under the Michigan system a committee from the University, at least once in three years, visits each institution which desires to have its pupils accepted on the principal's certificate, the expense of the visit falling on the institution and in no case on the University. In theory the object of this visit is two-fold. First, to ascertain the completeness of the course of study and the efficiency with which it is carried out, and secondly, to make suggestions and to render help both to instructors and to governing authorities as to courses of study and methods of instruction. In the hands of such men as the late Professors Frieze and Olney, and some living men whom we could mention, this second function of the visiting committee assumes an importance and renders a service which many teachers gratefully acknowledge, and which has served to place the secondary schools of Michigan on a higher plane than could otherwise have been reached. These periodic visits have also brought the University and the lower schools into a relation of intimacy which has been in the highest degree beneficial to both. They have been not merely visits of inspection, but also of counsel and of sympathy. By them university professors have had their eyes opened to difficulties of which they otherwise would have known nothing, have learned to appreciate as they could otherwise never have done the efforts of the secondary teachers, and have used their own experience and have given their best thought for the solving of problems which confronted the lower schools. On the other hand, the teachers in the secondary schools have learned, what might otherwise have been concealed from them, that university men take an interest in the lower schools, know their difficulties and sympathize with their struggles. More than this, teachers come to feel that they can expect definite help from these same professors. On no other theory can we explain the excellence of the Michigan secondary schools.

It is said that these inspections can never be thorough, or impartial, and that they are often a mere farce. This last we do not believe. As to the charges of partiality and lack of thoroughness, it is conceivable that these same charges could be made against any system of examinations that has ever been devised, and we think it would not be impossible to substantiate the charge. Not that there is intentional superficiality or unfairness, but that from the very nature of the case it is impossible that any examination should be a thorough test of any great number of candidates, and no examiner ever yet framed a set of questions which would exactly discriminate the mental capacity, or even the intellectual attainments, of a group of boys.

At the present time out of nearly three hundred high schools in Massachusetts, only nineteen ever prepare boys for Harvard College, and only half this number regularly offer candidates every year. This too, in the face of the fact that Boston alone has ten high schools for boys, Cambridge two, and that there are 102 cities and towns in Massachusetts with a population exceeding 4,000. We do not think this result would ever have come about if, in the past, visiting committees from Harvard College had regularly inspected these high schools whenever the community desired it and was ready to pay the expense. The influence and inspiration that would necessarily have come to teachers from contact with such men as Harvard has in abundance in its teaching force, and the knowledge that these same university men would have obtained as to the actual condition, needs and difficulties of the secondary schools, would unavoidably have drawn these institutions together to their mutual benefit. The teaching in the high schools would have been improved, the attendance increased, the influence of the University would have gone down more directly to the schools and would inevitably have reacted with advantage to the former.

The loss which the university would suffer from the absence of professors from their regular duties in case this work of inspection was undertaken, has, we think, been greatly overestimated. Harvard University has a faculty and corps of instructors numbering something more than two hundred. Supposing that only one-tenth of these gentlemen were available for the work of inspection, and that all the nineteen high schools in Massachusetts, that ever send students to Harvard, were at once to ask for inspection, it would involve but one absence from the college work for each of the twenty available men during the present year. Supposing three days were occupied by each of these inspections, there would be sixty days lost to the college. But if all the instructors work every day during the college year, it follows that there are more than forty thousand working days, and we think the loss of sixty out of forty thousand would not be seriously felt. Under a system similar to that of Michigan, these visits of inspection would not have to be made again for three years, and if next year twenty other schools of New England were to apply for inspection, and the succeeding year twenty more, there would still have been lost each year only sixty working days out of more than forty thousand. We submit that the play is worth the candle. Sixty schools of New England brought into direct relations with a great university; sixty corps of teachers stimulated and inspired by the presence of such men as Harvard could send out, would be an educational achievement worthy of some sacrifice. But we have purposely underestimated the number of men whom Harvard could spare once a year for this work, and have purposely overestimated the loss to the college. No system of college admission is at present an ideal one. There is therefore all the better opportunity for some great institution to put into practice one that is ideal. Such, we humbly submit, is not the present one of admission by examination.

The forty-seventh annual meeting of the Massachusetts Teachers' Association was decidedly less brilliant than that of the preceding year. It does not on that account, however, necessarily follow that it had less practical value for teachers. The attendance was much better than it has sometimes been. In fact it at times entirely exceeded the accommodations that were at the disposal of the Association. The ventilation of all the rooms where the sessions were held was exceedingly bad. As usual, the high school section was assigned a room entirely inadequate as far as size was concerned. For three consecutive meetings this section has presented the spectacle of a little room crowded to its utmost, with all available standing room occupied, with throngs about the door and with more people turned away than would have sufficed to fill another room of the same size. For a number of years this section has offered papers of the very highest order of merit, and in proportion to the number of teachers of its grade in the state, it has been better attended than any other section. We cannot remember, however, when it has had a room at its disposal that would furnish even standing place for those who wished to attend.

The opening paper of Friday morning was by Mr. Hanus, assistant professor of the history and art of teaching in Harvard University. We had looked forward to this paper hoping that it would afford some idea of what the new departure at Harvard stands for. It has generally been understood among teachers to be the current belief at Harvard that there is no such thing as a science of education, even if there be possibly an art of teaching, and this belief President Eliot has commonly been supposed to share. Consequently, when last year there was appointed an assistant professor of the history and art of teaching, there was no small curiosity to learn what manner of man this new professor was. The fact that the appointee was from the distant west was hailed by some as an indication that there was in staid New England no proper material for such a position. Others saw in the fact the Professor Hanus was comparatively unknown in the educational world, an indication that the authorities of Cambridge had little interest in the new departure, and would not unwillingly see the whole experiment fail. Professor Hanus's recent contribution to the *Educational Review* afforded little clue to his personality or to his views as to his department, and his paper before the Massachusetts Association cannot be said to have made either subject luminous. We fear that he has had much missionary work to do at Cambridge, and that he came to the Association with the expectation that the teachers of Massachusetts were likely to question the wisdom of university courses in pedagogy. In this we think he was mistaken. To set forth and advertise to a body of teachers the importance of professional training, or even the general lines which it should follow, is in these days no great compliment to their intelligence or to their progress. It is much like those endless disquisitions on the importance and the value of science-teaching to which we used to listen at teachers' meetings long after everybody conceded the absolute necessity of science work, and when thousands of teachers were seeking everywhere for a sensible and practical propaideutic on the subject; or, like those wonderful utterances by which certain speakers in recent years have tried to convince us that teachers should strive to make the children under them grow up into good men and women. In every new venture in education there is first the period of agitation during which attempts are made to show the desirability of the new; then comes a period when the desirability is conceded and the question of method arises. At this stage the man who delays us with arguments in favor of the change which we already have decided upon is clearly an obstructionist. Unless we greatly mistake there are few thoughtful educators who would not rather learn how teachers can be trained than listen to arguments in favor of training them.

President Hyde's paper on our Ethical Resources was not only interesting in itself but it lost nothing by his admirable delivery. He informs us that it is to be published in an early number of the *Andover Review* and we commend it to the attention of our readers. We give in the present number abstracts of Mrs. Palmer's talk on the Influence of the Teacher's Manners, and of Mr. Grandgent's paper on the Teaching of French and German in our Public High Schools, together with the discussion which followed the latter.

Mr. Hill's paper with the accompanying diagram as published in full in the December ACADEMY has been reprinted in the Official Report of the October meeting of the New England Association of Colleges and Preparatory Schools. It is also to appear in the forthcoming report of the Secretary of the Massachusetts State Board of Education, where it will reach the eye of many who would perhaps not otherwise see it.

ONE of the ever present embarassments that beset the editor of an educational journal, is the difficulty of obtaining adequate reviews of such books as appear from time to time demanding the notice of teachers. A just and discriminating comment upon a new book is something which every thoughtful teacher highly esteems. It saves him labor, it places him on his guard against what is unworthy, or sets him upon the track of something which will really help him. But there is no department of editorial work which lays a heavier tax upon the resources of the editor. We are moved to this comment by the review which appeared in the December number of the *Educational Review* on Dr. Sihler's "Complete Lexicon of Cæsar's Gallic War." The *Educational Review* has, from the outset, given special attention to its book notices, and they have been, as a rule, excellent. In this case, however, we do not deem them fortunate. Not only is the general tone of the review entirely complimentary, but the writer says: "Contrary to what one would expect in a work of this character, typographical errors are remarkably rare." As bearing somewhat on this question, we call to mind that a teacher who recently applied to the publishers of the book for a copy, was informed that the book could not be had; that it had been found to contain so many mistakes that they had decided to withdraw it!

For the benefit of those who are interested in comparing the work done in English secondary schools, with that done in American, we cannot forbear quoting from a recent editorial in the London *Educational Review:* "The winning of half a dozen scholarships is nothing worth in comparison with the passing with credit of ninety per cent of the upper school through a higher 'local' examination. How few of the public schools, for example, gained a respectable number of the Oxford and Cambridge certificates this year. Eton has one thousand boys, of whom at least three hundred must be in forms equivalent to the average upper school, and at least one hundred of these should be in what may be called the two or three first classes. Yet of these certificates she gained but twenty-five, and with the sole exception of Rugby, who exceeds her by one, she tops the list! Westminster obtained thirteen; Uppingham, ten; Cheltenham, six; while the absence of many of the best schools would almost suggest the lack of a desire to prove that the average of the general attainments is as high as it should be. It is on this matter of the *average*, that we are more especially interested; and we hope before long to see schoolmasters more anxious to prove that all the boys in their sixth and fifth forms have reached an average high standard, than to point the finger to the two or three exceptionally brilliant lads, who in other hands would probably have done as well, and who in any case, have had special opportunities of study and special attention in teaching. This desideratum, however, is yet to be achieved."

BOOKS RECEIVED.

Ethics for Young People. By C. C. Everett. Boston: Ginn & Co. 1891.

In this little book a man who is already distinguished as an impressive preacher, a subtle thinker, and an acute critic, essays to speak to youth. The author of the "Science of Thought" and of "Poetry, Comedy and Duty," makes a school text-book. We find it no marvel that he has succeeded in his aim. The sum of our observation of the happy and the unhappy efforts in the arena of school-book making is not in favor of the peculiar fitness for such work of the teacher himself. The working teacher tends to schematize his matter, to methodize and systematize, with a view to the assignment of lessons and to preparation for examinations. But the quality most essential to adapt a book to youth is not by any means clever adjustment to the chance determination of terms, and days, and hours, but clear and engaging expression. Too minute and too obtrusive analysis spoils a book as much for the young as for the old. A pleasing and connected exposition, an interesting style that holds the attention, clear and forcible presentation that keeps to its theme just long enough and then passes on to the consideration that is next in order, — these qualities attract the young just as much as they do the mature. In short, the literary quality of a book is the main thing, even if the book is intended for use in school, and is to be denominated a text-book.

Professor Everett's book by no means lacks system. In his table of contents he arranges his chapters under the four main heads, — Morality in general, Duties towards one's self, Duties towards others, Helps and hindrances. This slight exhibition of a scheme is all that is to be found in the book. The chapters are unbroken by paragraph numberings and headings. The book is meant to be read. Consecutiveness, continuity, readableness, intelligibility, — these are the chief note of its form.

As to its content, we cannot do better than quote the headings of its forty-six chapters. These are, — The Relation of Ethics to other Studies, — two chapters; The Relation of the Different Sciences to Reality; Ethics as a Way of Life; The Ethics of Custom; The Imperfection of the Ethics of Custom; Principles in Morality; The Breaking up of the Ethics of Custom; The Epicureans; The Stoics; Fortitude; Courage, — two chapters; Heroism; Different

Kinds of Heroes; Contentment; Ambition; Education as a Duty; Self-Education as a Duty; Self-Respect (including Cleanliness and Purity), — two chapters; Self-Control; Self-Reliance; Relations to Others; Selfishness; Obedience; Love and Sympathy; Usefulness; Truth and Honesty; Good Temper; Courtesy; The Playground; Fun; Friendship; The Home; The School; Patriotism; Kindness to Animals; Companions; Reading; The Imagination; Industry; Habit; Temptations; The Conscience; Conclusion.

The small scale on which the book is planned is seen from the fact that these forty-six chapters occupy but 185 pages of print. Each chapter stops far short of the point of tedium, evidently leaving much more to be said, — an especial virtue in a book meant to stimulate thought rather than to furnish information.

We are not sure but the best way to use such a book would be to have a chapter read without much comment one day, and the next day to call for original comment and illustration, on the supposition that the matter of the given chapter has been meanwhile pondered by the class in private. In this case the class should not have the book in their hands. If they have the book, they will hardly be kept from committing to memory its language. Much the better way is to send pupils home with some ideas. If these ideas are within the domain of elementary ethics, the pupils have but to look about themselves at any moment, or to look within their own bosoms, to find concrete cases and illustrative material in abundance. To give pupils something to study that is already formulated is to put them at a disadvantage. They may, indeed, be told not to commit the language of the book. The best way to make sure that they shall not commit the language of the book is to keep this language away from their eyes during their study hours.

Professor Everett seems to us, in this delightful primer of ethics, an instructor no less weighty than he is in the pulpit, or in his chair of theology. Pedagogically, we pronounce him sound. Many books are now appearing that seek to avail themselves of the existing interest in the teaching of morals. For ourselves, we see most clearly how to utilize, in our way of teaching, this one of Professor Everett.

Victorian Poets. By Amy Sharp. University Extension Series. Methuen & Co., 1891.

This book is "merely preparatory to the much fuller and more detailed study encouraged by attendance on a course of lectures."

The poets treated — mainly by a running comment on the plots and characteristics of their chief works — are Tennyson, the two Brownings, Clough, Arnold, Rossetti, Morris, and Swinburne. A simple and well-selected bibliography, chronological tables, and a good index, as well as the sense and taste of the author help to make the book better fitted than any other we have seen for use with classes in contemporary English literature. The excellencies, however, only make the more striking the entire absence of any attempt to treat the authors mentioned otherwise than as completely isolated facts. Clough and Arnold are bracketed together in a single chapter, but no effort is made to compare and contrast them, or to regard them as different species of the same genus. Nor does it occur to the author that the very phrase, "Victorian poets," like "Elizabethan poets," implies a certain necessary unity of thought and feeling in the midst of the diversity of individual development. In a word, Miss Sharp has deserted that historical and scientific method which one would have supposed that the University Extension Movement would most encourage in the study of contemporary authors. By so doing she produces, it is true, a fairly accurate text book, but she shuts out the possibility of its filling its niche in the history of contemporary literature.

The Child and His Book. Some account of the history and progress of Children's Literature in England, by Mrs. E. M. Field. London, 1891.

Mrs. Field has certainly succeeded in presenting in a readable, attractive shape the results of her researches into the development of children's books. Both books of instruction and books of entertainment come within her plan. Thus she traces the history of the school-book, or, as it is still perversely called, the *text-book*, and also the history of the story-book. With the aid of wood-cuts and facsimiles she makes us see the pages that were conned by English children from the time of Caxton onward. Here we see and, seeing, understand the *horn-book* that figures so largely in the old writers. The *chap-book* also is explained. The spelling-book, perhaps, like Rome, has already had its rise and fall. Only the modern world has its primers. The ancient world paid but little heed to its children; certainly it made no books for them.

If the history of pedagogy is important to the intelligent teacher, surely a history of the instruments and tools of the pedagogues of past ages has its interest. The school-books reflect the methods of the schools. The Latin teacher of to-day will naturally be curious to know with what first Latin books the language was taught to those generations of youth who grew up Latin scholars, able to understand and to use Latin. Does the mystery of the decay of fluency in Latin in any measure lie in the altered character of the books used in the schools?

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Trusting to his own experience as a teacher, the editor has deemed it wise somewhat to shorten the essay of Macaulay. This he has effected by the omission of passages somewhat episodic or discursive in their character, in which the essayist displays his historical erudition, but in which he cannot profitably be followed by immature readers.

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